

Service  
Service  
Service



CDV475

44 152 A11



CDV988

44 277 A11

This manual replaces manual CDV475/00R/05R code nr.:4822 725 21983

# Service Manual



CDV988 is the matchline version of the CDV475 the differences are:

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Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

**CLASS 1  
LASER PRODUCT**

3122 110 03420

Documentation Technique Service Dokumentation Documentazione di Servizio Huolto-Ohje Manual de Servicio Manual de Serviço



"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

Subject to modification

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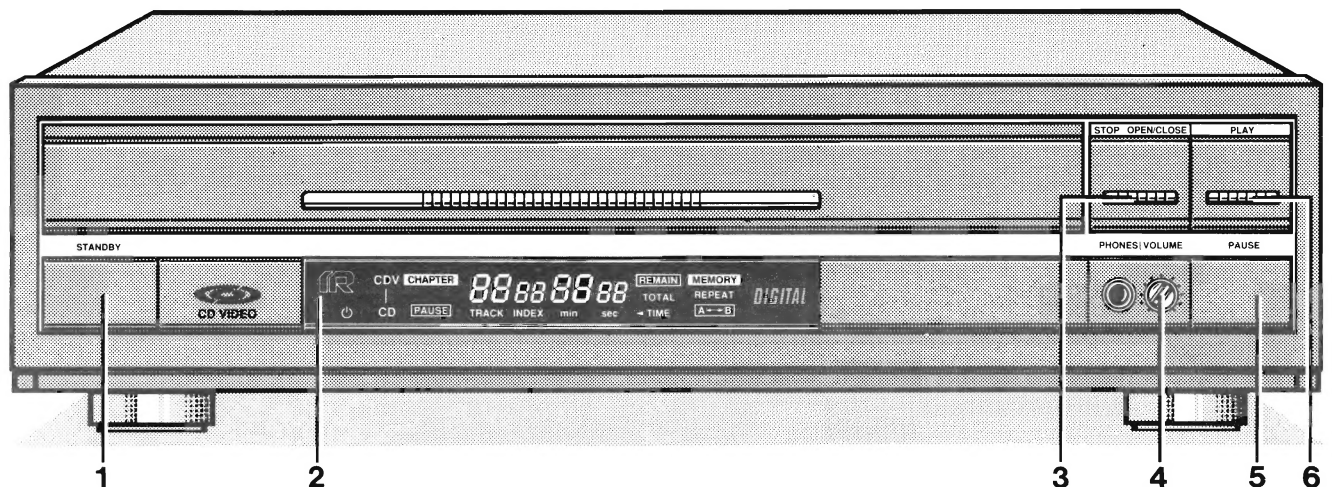


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## 2. CONNECTIONS AND CONTROLS



### Front panel controls

#### 1 'STANDBY' key

In 'Standby' mode, switches the player to 'On'. In 'On' mode switches the player to 'Standby'. Can be used to switch the player to 'Standby' from any operating condition.

#### 2 'IR' eye

Receives the signals from the remote control handset. When a signal is received, a red LED lights on the player display, and a star appears on the TV screen.

#### 3 'STOP OPEN/CLOSE' key

Opens and closes the disc tray and stops play.

With the disc tray closed, and the player stopped, pressing this key opens the disc tray. A second press closes the tray again. When a disc is playing, pressing this key once stops the player. Pressing it a second time opens the disc tray, after the disc has stopped rotating.

The key has a built-in LED which lights while the 'STOP OPEN/CLOSE' function is active.

#### 4 'VOLUME' control

Controls the sound level when listening with headphones connected to the 'PHONES' socket.

#### 5 'PAUSE' key:

Holds play at the start of a track, chapter or passage, or interrupts play.

Pressing this key closes an open tray and brings the laser pick-up head to the start of the first track or chapter, in readiness for a further command.

The key has a built-in LED which lights while the 'PAUSE' function is active.

#### 6 'PLAY' key

Starts play, or returns to the beginning of a track or chapter.

Pressing this key closes an open tray and starts the disc playing. Pushing the front of an open tray produces the same result.

The key has a built-in LED which lights while the 'PLAY' function is active.

## CONNECTIONS

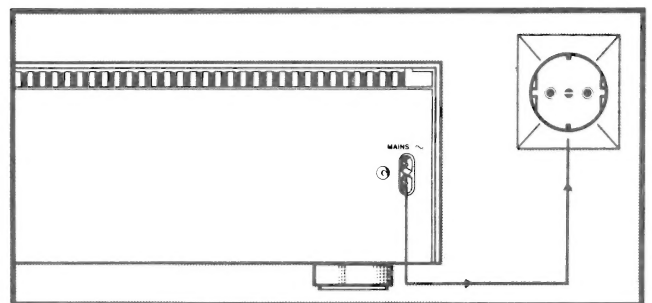
At the back of the player you will find the following connection sockets:

- 'REMOTE OUT/IN' (2 x Cinch)
- 'VIDEO' (Cinch)
- 'OUT L/R' (2 x Cinch, gold plated)
- 'ANT.-IN'
- 'T.V.-OUT'
- 'DIGITAL OUT' (Cinch, gold plated)
- 'A/V EUROCONNECTOR'
- 'MAINS'

A 6.3 mm stereo headphone socket is located on the front panel ('PHONES').

The connection facilities are designed to give you the best possible CD-Video sound and pictures obtainable from your audio and video equipment.

### Connecting to the mains



Connect the socket end of the power cable supplied to the 'MAINS' connector on the player, and plug the other end in to a wall socket. The red LED on the display will light up to indicate that the player is in 'Standby' mode. In this mode, only the remote control receiver and antenna amplifier are powered; the rest of the player is switched off.



## Controls on the remote control handset

### 7 'DISPLAY' key

Selects the information, relating to disc play, shown on the player display and the TV screen. The information displayed depends on the type of disc being played.

### 8 'STANDBY' key

The same function as on the front panel.

### 9 NUMERIC PAD '1-0' keys

For track, chapter, frame and time selection.

### 10 'CLEAR' key

Clears incorrect Numeric Pad '1-0' entries for track, chapter, frame or time selections. Erases programmes.

### 11 'MEMO' key

Stores track or chapter numbers in the memory during programming.

### 12 'TRACK/CHAPTER' key

For selecting or programming tracks or chapters using the Numeric Pad.

### 13 'FRAME/TIME' key

For selecting frames or times using the Numeric Pad.

### 14 'A/B REPEAT' key

Defines and starts a continuous repeat cycle between two selected points on a disc.

### 15 'CONT. REPEAT' key

For repeating a disc or programme.

### 16 'STOP OPEN/CLOSE' key

The same function as on the front panel.

### 17 '- SPEED +' keys

For reducing ('-') or increasing ('+') the playback speed of Active Play discs.

'-' gives steps of  $\frac{1}{2}$ ,  $\frac{1}{4}$  and  $\frac{1}{8}$  of the normal speed, 1 frame per second and 1 frame per 3 seconds; '+' gives steps of  $2\times$ ,  $4\times$ , and  $8\times$  the normal speed.

### 18 'REV SLOW FWD' keys

For reverse playback with the facility to change the speed ('REV') and for slow or fast motion playback in the normal direction ('FWD') with Active Play discs.

### 19 'REV STILL FWD' keys

For holding play at a particular frame, and for frame-by-frame playback in either reverse ('REV') or forward ('FWD') direction with Active Play discs.

### 20 'REV SCAN FWD' keys

For searching out particular passages in either reverse ('REV') or forward ('FWD') direction.

### 21 'TRACK/CHAPTER' 'PREV' 'NEXT' keys

For moving to a previous ('PREV') or following ('NEXT') track or chapter.

### 22 'PAUSE' key

The same function as on the front panel.

### 23 'PLAY' key

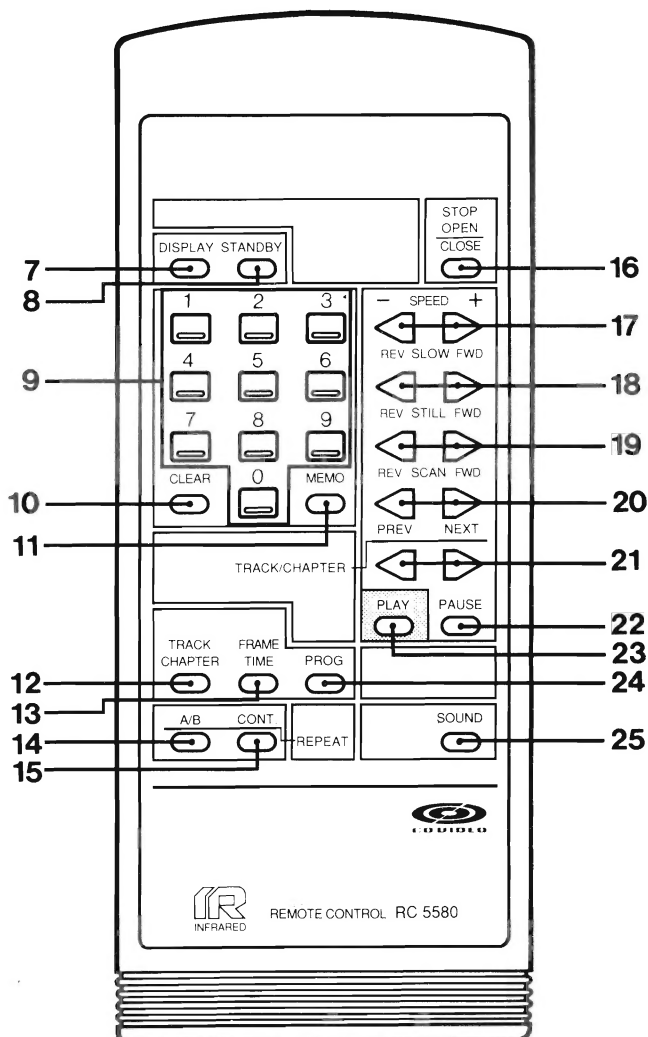
The same function as on the front panel.

### 24 'PROG' key

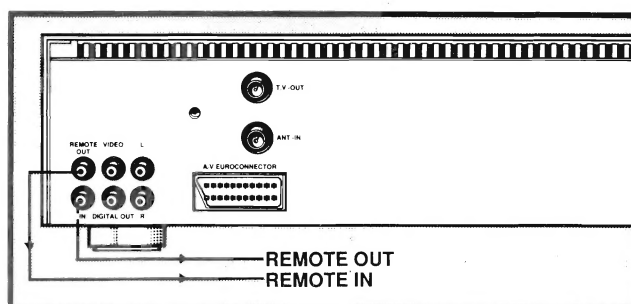
For the selection of the programming function.

### 25 'SOUND' key

Switches between stereo sound, sound track 1 and sound track 2 sequentially. Not operational for Compact Discs, or audio-only sections of CDV Singles.



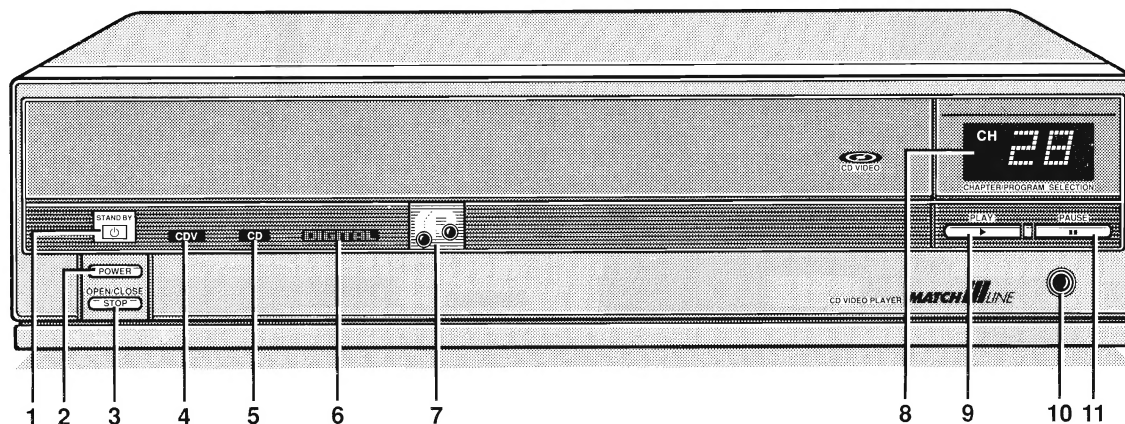
## Connecting to another remote control receiver



If you have a TV or A/V system which is operated via a suitable 'RC5' Remote Control receiver, you can operate your CDV 475 via the remote control receiver of this system. Consult the directions for use of the system or TV, and connect the 'REMOTE OUT/IN' sockets of the CDV player with the System or TV. If the location of the player - for example in a cabinet - makes reception of the remote control signals difficult, you can also connect a separate remote control receiver and locate it at a suitable place. Such a receiver is available as an accessory under type number EM 2200, and should be connected to the 'REMOTE IN' socket on the player.



## 2. CONNECTIONS AND CONTROLS CDV988



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You can play discs on your new CD Video player by following the foregoing simple instructions. It's as easy as that.

But of course, the CDV988 offers many more facilities. Before you try to use them, it is best to get to know the controls and indications, the display and the messages on the TV screen, and what they can do for you.

First, the controls on the front of the player are described, then those on the remote control handset. An explanation of the player's display, and the TV screen messages, then follows.

### Front panel controls

- 1 'STAND BY' indication  
Lights when the player is in 'stand by' mode.
- 2 'POWER' key  
In 'stand by' mode, switches the player to "on". In 'on' mode switches the player to 'stand by'. Can be used to switch the player to 'stand by' from any operating mode.
- 3 'STOP OPEN/CLOSE' key  
Opens and closes the disc tray and stops play. With the disc tray closed, and the player stopped, pressing this key opens the disc tray. A second press closes the tray again. When a disc is playing, pressing this key once stops the player. Pressing it a second time opens the disc tray, after the disc has stopped rotating.
- 4 'CDV' indication  
Lights when a CD Video or CD Video Single disc is being played and flashes when one of these discs, or a programme from one, is being repeated.
- 5 'CD' indication  
Lights when a Compact Disc is being played and flashes when one of these discs, or a programme from one, is being repeated.
- 6 'DIGITAL' indication  
Lights when digitally recorded sound is being played.
- 7 'IR' eye  
Receives the signals from the remote control handset. When a signal is received, a red LED lights next to the eye, and a star appears on the TV screen.
- 8 Display  
Informs you about the functioning of the player.
- 9 'PLAY' key  
Starts play, or returns to the beginning of a track or chapter. Pressing this key closes an open tray and starts the disc playing. Pushing the front of an open tray produces the same result.
- 10 Headphones socket  
For listening to discs without using an amplifier.

### 11 'PAUSE' key:

Holds play at the start of a track, chapter or passage, or interrupts play.

Pressing this key closes an open tray and brings the laser pick-up to the start of the first track or chapter, in readiness for a further command.

### Controls on the remote control handset

- 12 'DISPLAY' key  
Selects the information, relating to disc play, shown on the TV screen. The information displayed depends on the type of disc being played.
- 13 'STANDBY' key  
The same function as the 'POWER' key on the front panel.
- 14 NUMERIC PAD '1-0' keys  
For track, chapter, frame and time selection.
- 15 'CLEAR' key  
Clears incorrect Numeric Pad '1-0' entries for track, chapter, frame or time selections. Erases programmes.
- 16 'MEMO' key  
Stores track or chapter numbers in the memory during programming.
- 17 'TRACK/CHAPTER' key  
For selecting or programming tracks or chapters using the Numeric Pad.
- 18 'FRAME/TIME' key  
for selecting frames or times using the Numeric Pad.
- 19 'A/B REPEAT' key  
Defines and starts a continuous repeat cycle between two selected points on a disc.
- 20 'CONT. REPEAT' key  
For repeating a disc or programme.
- 21 'STOP OPEN/CLOSE' key  
the same functions as on the front panel.
- 22 '- SPEED +' keys  
For reducing ('-') or increasing ('+') the playing speed of Active Play discs.  
'- gives steps of 1/2, 1/4, 1/8 and 1/16 of the normal speed, 1 frame per second and 1 frame per 3 seconds; '+' gives steps of 2x, 4x and 8x the normal speed.
- 23 'REV SLOW FWD' keys  
For reverse playback with the facility to change the speed ('REV') and for slow or fast motion playback in the normal direction ('FWD') with Active Play discs.  
'REV STILL FWD' keys.
- 24 For holding play at a particular frame, and for frame-by-frame playback in either reverse ('REV') or forward ('FWD') direction with Active Play discs.
- 25 'REV SCAN FWD' keys  
For searching out particular passages in either reverse ('REV') or forward ('FWD') direction.



## 26 'TRACK/CHAPTER' 'PREV' 'NEXT' keys

For moving to a previous ('PREV') or following ('NEXT') track or chapter.

## 27 'PAUSE' key

The same function as on the front panel.

## 28 'PLAY' key

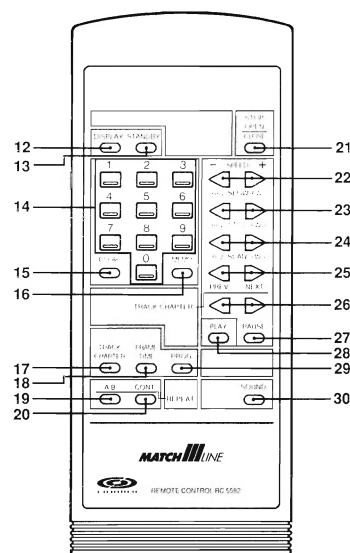
The same function as on the front panel

## 29 'PROG' key

For the selection of the programming function.

## 30 'SOUND' key

Switches between stereo sound, sound track 1 and sound track 2 sequentially. Not operational for Compact Discs, or audio-only sections of CD Video Singles.



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### Transporting the player

For transport, the player mechanism must be properly secured by re-fitting the packing piece and the transit screw with collar, or damage may result. For this purpose, the player must be connected to the TV set and mains supply.

- Take the black plug from the transit screw hole in the top panel and press it into the hole provided in the packing piece.
- Take the transit screw and red collar from the packing piece.
- Switch on the player by pressing 'STANDBY', and also switch on the TV.
- Open the drawer by pressing 'STOP OPEN/CLOSE'.
- Fit the packing piece in the position shown.
- Hold 'STOP OPEN/CLOSE' **pressed** and while the drawer is closing press 'STANDBY' as well.
- Immediately after 'TRANSPORT' appears on the TV screen, disconnect the player from the mains supply; also from the TV set after switching it off.
- Finally fit the transit screw and red collar.

### Removing the transit clamps

- Open the partly open flap of the disc tray completely and remove the two red triangular blocks. Then allow the flap to shut.
- Clip the transit screw together with its red collar on to the packing piece. Keep this piece and the red triangular blocks in a safe place, because the blocks, packing piece, screw and collar must be refitted if you should need to transport the player again. See 'Transporting the Player' under 'ADDITIONAL INFORMATION'.

### Transporting the player

For transport, the player mechanism must be properly secured by re-fitting the red triangular blocks, the packing piece and the transit screw with collar, or damage may result. For this purpose, the player must be connected to the TV set and mains supply.

- Hold 'STOP/OPEN/CLOSE' **pressed**, and while the tray is closing press 'POWER/STANDBY' as well. During this operation the flap of the tray must be kept open! The indication 'TRANSPORT' appears on the TV screen.
- While keeping the flap open, push the red triangular blocks in the corners of the tray opening. Then close the flap as far as possible.



**4. Audio performance****4.1 Digital Audio**

All values measured from 20 Hz to 20 kHz into nominal load except when indicated otherwise.

- 1 Number of channels : 2
- 2 Output voltage :  $260 \text{ mV}_{\text{RMS}} \pm 0.5 \text{ dB}$  at  $-20 \text{ dB}$ , 1 kHz
- 3 Left-right unbalance :  $\pm 0.6 \text{ dB}$  max
- 4 Output impedance :  $200 \Omega$
- 5 Nominal load impedance :  $10 \text{ K}\Omega//300 \text{ pF}$
- 6 Amplitude response :  $\pm 0.5 \text{ dB}$  max
- 7 Phase non-linearity :  $\pm 0.5 \text{ deg}$
- 8 SNR :  $> 94 \text{ dB}$
- 9 SNR (with SCART and TV-set on) :  $> 80 \text{ dB}$
- 10 Dynamic range :  $> 90 \text{ dB}$
- 11 THD + noise :  $-90 \text{ dB}$  min
- 12 Outband suppression :  $> 50 \text{ dB}$  above 24.1 kHz
- 13 Channel separation (1 kHz) :  $> 96 \text{ dB}$
- 14 Mute during random acces :  $> 90 \text{ dB}$
- 15 Automatic switching deemphasis with 15/50  $\mu\text{s}$  time constants

**4.2 Analog Audio**

All values measured at 1 kHz-100% modulation into nominal load except when indicated otherwise.

- 1 Number of channels : 2
- 2 Output voltage :  $650 \text{ mV}_{\text{RMS}} \pm 1.5 \text{ dB}$  at
- 3 Left-right unbalance :  $\pm 1 \text{ dB}$  max
- 4 Amplitude response :  $40\text{Hz}-20\text{kHz} \pm 3\text{dB}$  max
- 5 SNR :  $> 50 \text{ dB}$
- 6 Channel separation (1 kHz) :  $> 50 \text{ dB}$
- 7 Distortion :  $< -40 \text{ dB}$
- 8 Analog deemphasis :  $75 \mu\text{s}$
- 9 Audio only during play forward, 80 dB mute during other functions

**4.4 Audio channels**

- 1 CD and clip (audio tracks): Stereo only
- 2 Clip (video track), CDV 8": Stereo & bilingual and 12"

- Headphone amplifier performance**
- Load impedance range :  $8 \Omega-2 \text{ k}\Omega$
  - Output power :  $30 \text{ mW}$  at  $32 \Omega$   
 $30 \text{ mW}$  at  $600 \Omega$
  - Frequency range :  $20-20.000 \text{ Hz} \pm 0.1 \text{ dB}$
  - Channel unbalance :  $\pm 0.5 \text{ dB}$
  - Signal-to-noise ratio :  $> 93 \text{ dB}$
  - Dynamic range :  $> 90 \text{ dB}$
  - Total harmonic distortion (incl. noise)(at  $600 \Omega$ ) :  $< 0.003\%$  ( $< -90 \text{ dB}$ )
  - Intermodulation distortion (at  $600 \Omega$ ) :  $< 0.003\%$  ( $-90 \text{ dB}$ )
  - Channel separation (at  $600 \Omega$ ) :  $< 75 \text{ dB}$

**Video performance**

- 1 CVBS output (CINCH & SCART) :  $1 \text{ V}_{\text{pp}}$  into  $75 \Omega$
- 2 RGB output (SCART) :  $0.7 \text{ V}_{\text{pp}}$  into  $75 \Omega$
- 3 RGB unbalance :  $> 3\%$
- 4 Bandwidth after demod. & TBC :  $5 \text{ MHz}$  ( $-5 \text{ dB}$ )
- 5 Rise/fall time :  $130 \text{ ns}$
- 6 Overshoot :  $< 8\%$
- 7 SNR unweighted :  $> 40 \text{ dB}$  (disc-SNR)  $45 \text{ dB}$
- 8 SNR Luminance :  $40 \text{ dB}$
- 9 SNR Chrominance :  $38 \text{ dB}$

- 10 Horizontal resolution : 440 lines
- 11 Video time base instability :  $< 10 \text{ ns}$ , except during SCAN

**Connections**

- CVBS output (cinch) :  $1 \text{ V}_{\text{pp}}$  into  $75 \Omega$
- RGB output (Euroconnector) :  $0.7 \text{ V}_{\text{pp}}$  into  $75 \Omega$
- Digital output (gold-plated cinch) :  $0.5 \text{ V}_{\text{pp}}$  into  $75 \Omega$
- Audio output (2x gold-plated cinch) :  $2 \text{ V}$  rms, typical, at  $10 \text{ k}\Omega$

- Remote in/out (2x cinch) :  $2 \text{ V}_{\text{pp}}$  at  $2.2 \text{ k}\Omega$  RC5
- Headphone (6.3 mm socket) :  $8-2 \text{ k}\Omega$
- RF output :  $75 \Omega$ -UHF channel 32-40 adjustable

- Antenna input :  $75 \Omega$

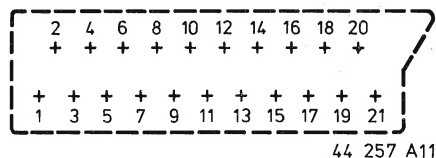
**Power supply**

- mains voltage :  $185-265 \text{ V}$  AC, with service solution for 110, 127 and  $240 \text{ V}$
- Mains frequencies :  $50$  and  $60 \text{ Hz}$
- Power consumption :  $55 \text{ W}$  approx.; stand-by  $8 \text{ W}$
- Electrical requirements : IEC

**Cabinet, general**

- Material/finish : metal/ABS; brushed front
- Dimensions (wxhxd) :  $420 \times 100 \times 393 \text{ mm}$  approx.
- Cabinet with tray closed :  $420 \times 100 \times 613 \text{ mm}$  approx.
- Weight :  $8 \text{ kg}$  approx.

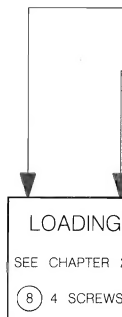
**The right is reserved to change data if necessary.**  
**This CD-Video player complies with radio interference requirements as laid down in EEC regulations.**

**A/V Euro connector****Pin Signal**

- 1 audio out (right)  $650 \text{ mV}$  r.m.s./ $1 \text{ k}\Omega$
- 3 audio out (left)  $650 \text{ mV}$  r.m.s./ $1 \text{ k}\Omega$
- 4 audio earth
- 5 blue earth
- 7 blue out  $0.7 \text{ V}/75 \text{ ohm}$
- 8 RC-5 in/out; CVBS status  $12 \text{ V}$
- 9 green earth
- 11 green out  $0.7 \text{ V}/75 \Omega$
- 13 red earth
- 15 red out  $0.7 \text{ V}/75 \Omega$
- 16 RGB status
- 17 CVBS earth
- 18 RGB status earth
- 19 CVBS out  $1 \text{ V}/75 \Omega$  (also acts as sync out when using RGB)
- 21 socket earth

**Service tools for the CDV475**

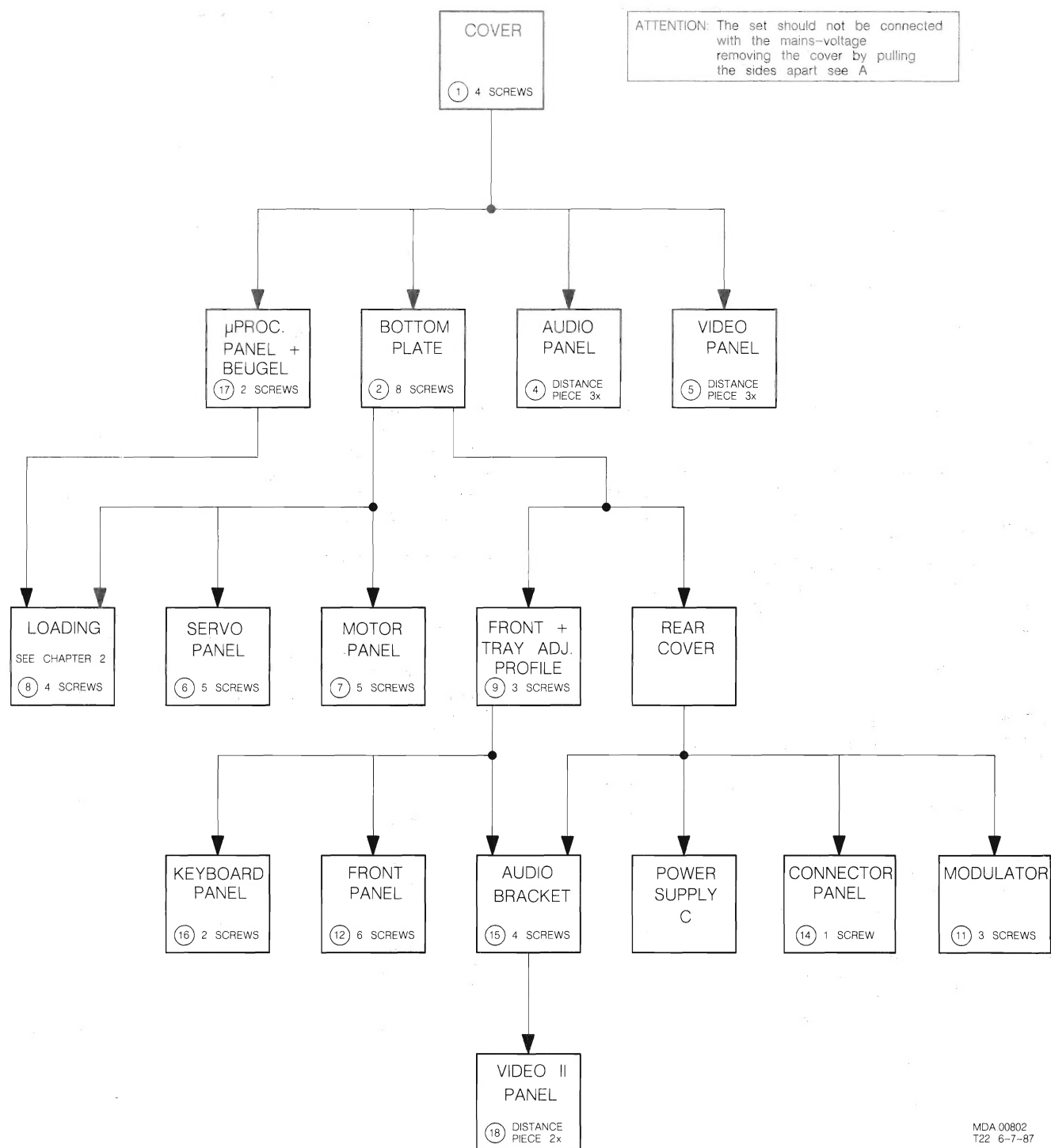
- |                                      |        |                |
|--------------------------------------|--------|----------------|
| 1x flat cable                        | (28 p) | 4822 321 22613 |
| 1x connector                         | (28 p) | 4822 267 70219 |
| 1x connector cable                   | (12 p) | 4822 321 22528 |
| 2x connector cable                   | (4 p)  | 4822 321 22529 |
| 1x connector cable (pal system)      | (6 p)  | 4822 321 22531 |
| 1x audio test disc 1 (type nr. 5/5a) | (set)  | 4822 397 30096 |
| 1x audio signals disc                |        | 4822 397 30185 |
| 1x cdv single test disc              |        | 4822           |
| 4x support (Loading)                 |        | 4822 395 30202 |
| Torx screwdriver set                 |        | 4822 395 50145 |

**WARNING****ESD**

All ICs and components are susceptible to ESD. Careless handling can damage them drastically. When repairing, use proper ESD precautions with the static wrist wrap. Keep components in ESD bags.

Radiation and



MDA 00802  
T22 6-7-87

## WARNING

## ESD

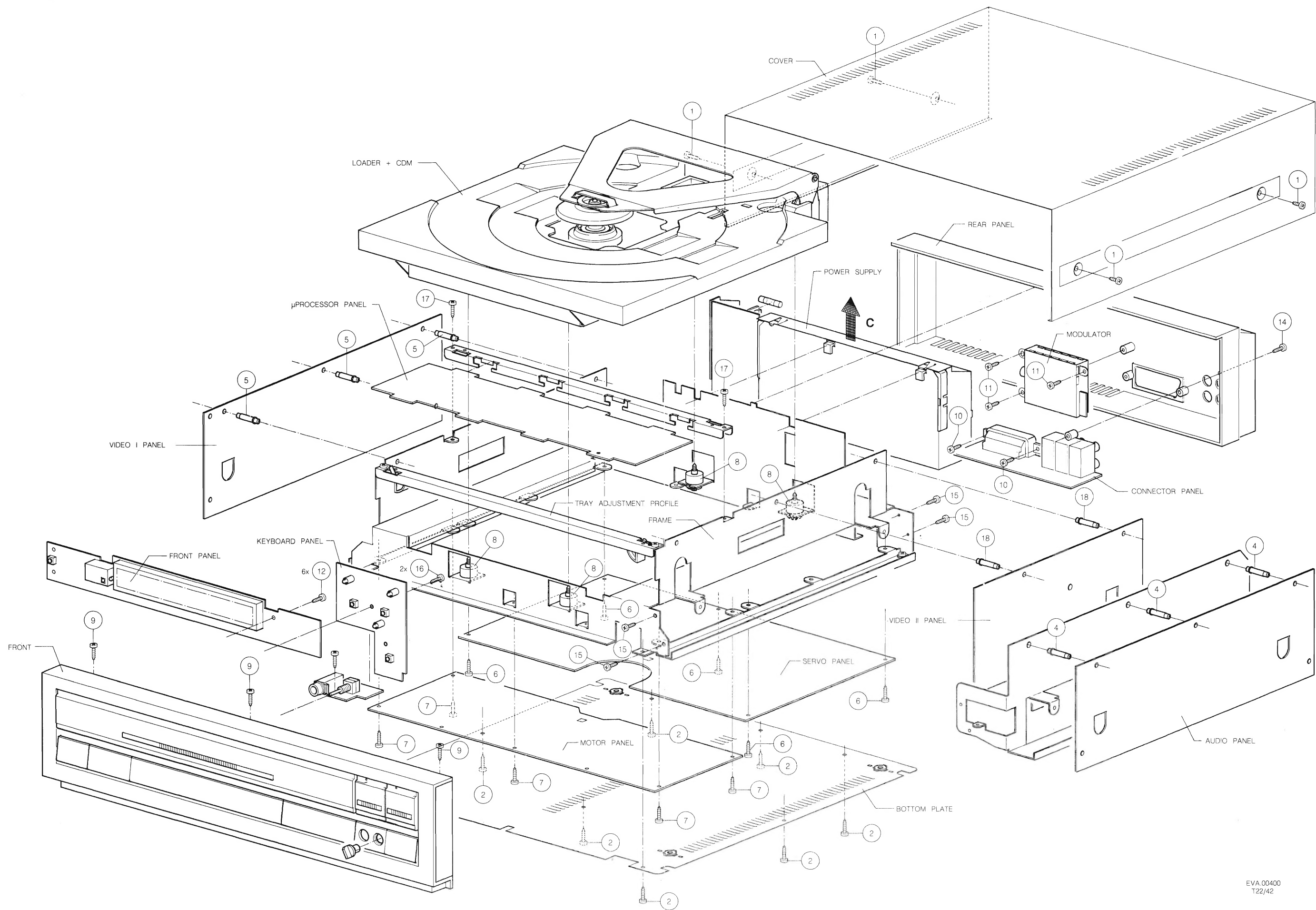


All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.

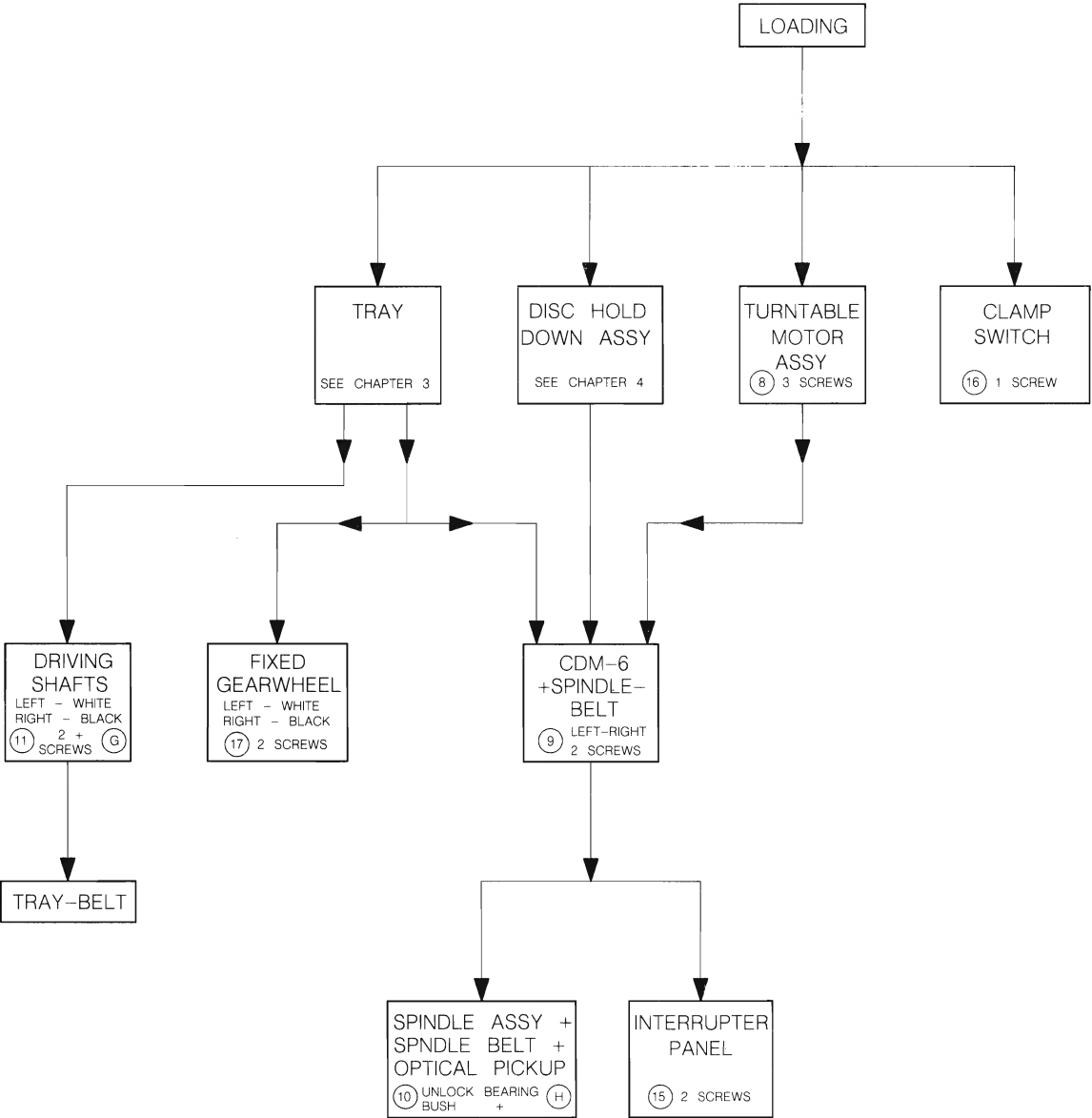
Keep components and tools also at this potential.





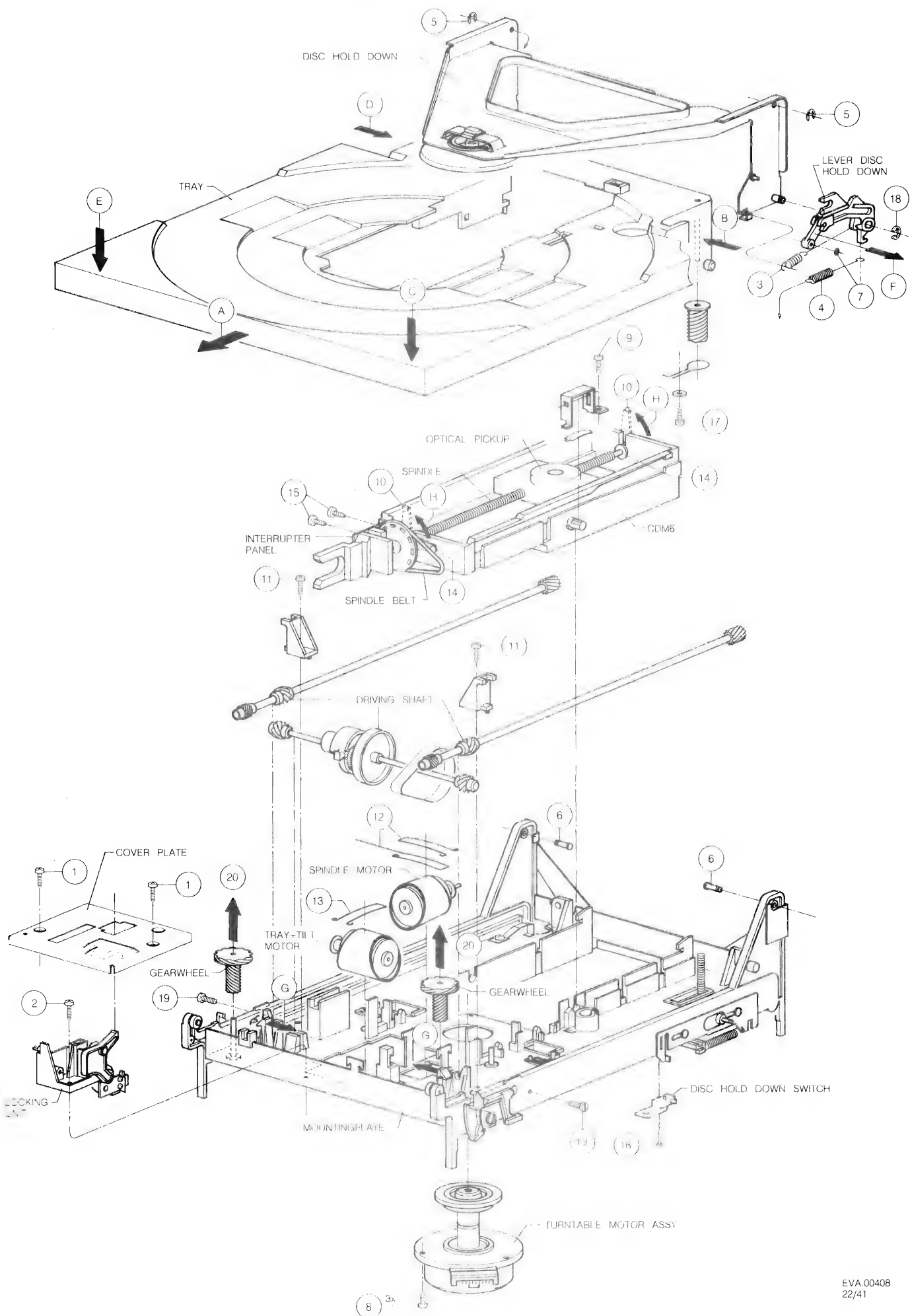


CHAPTER 2  
DISASSEMBLY LOADING



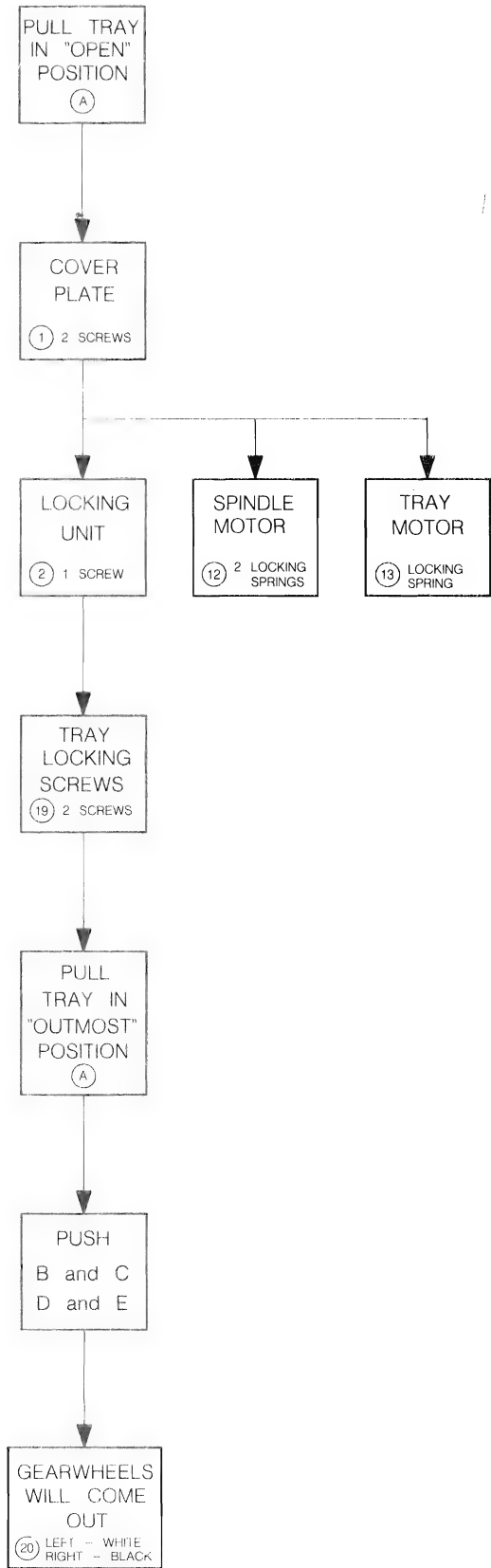
MDA 00836  
T22/42



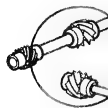
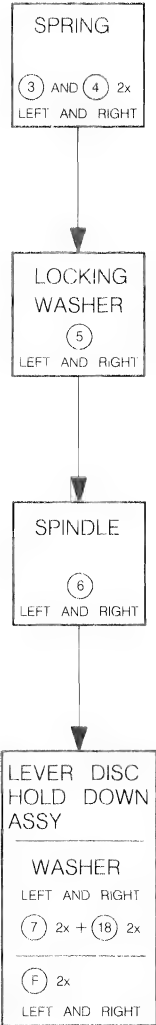




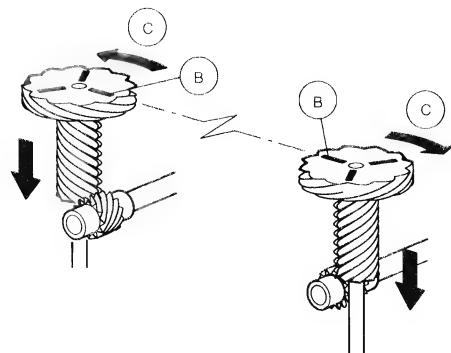
CHAPTER 3  
DISASSEMBLY TRAY



CHAPTER 4  
DISASSEMBLY  
DISC HOLD DOWN ASSY







ASSEMBLY

- GEARWHEEL

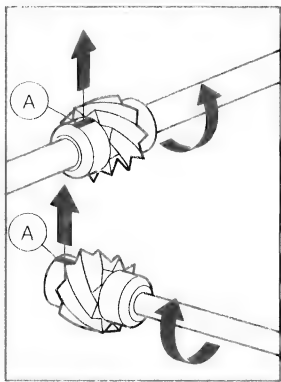
ATTENTION

LEFT - WHITE  
RIGHT - BLACK

MARK (B) TO  
THE INNER SIDE

AND TURN (C)

MDA 00862  
T22/42



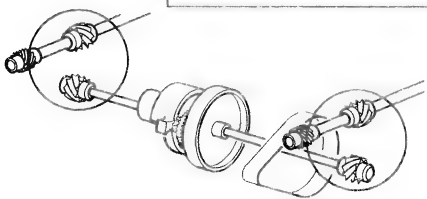
ASSEMBLY

- DRIVING SHAFTS

ATTENTION

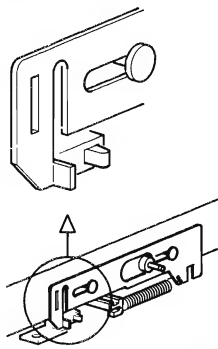
LEFT - WHITE  
RIGHT - BLACK

THE MARKS (A)  
AT THE TOP SIDE

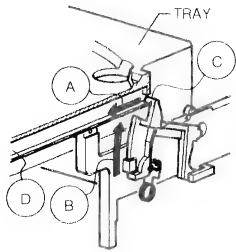


MDA 00862  
T22/42

MECHANICAL ADJUSTMENT



MDA 00862  
T22/42



ASSEMBLY

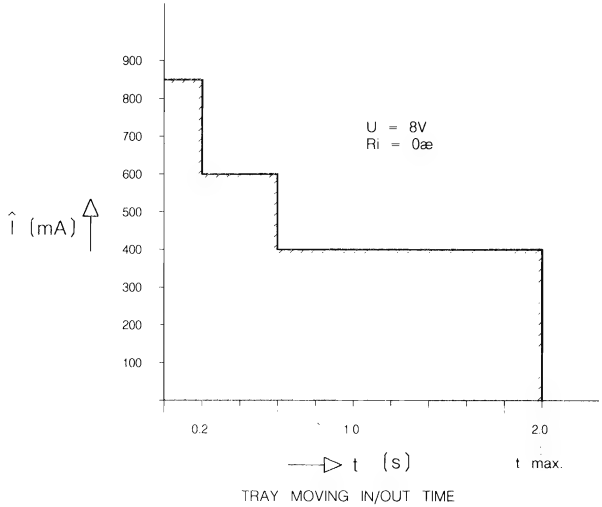
- TRAY HOLD DOWN

TRAY OUT MOST POSITION

TRAY HOLD DOWN ASSY (B)

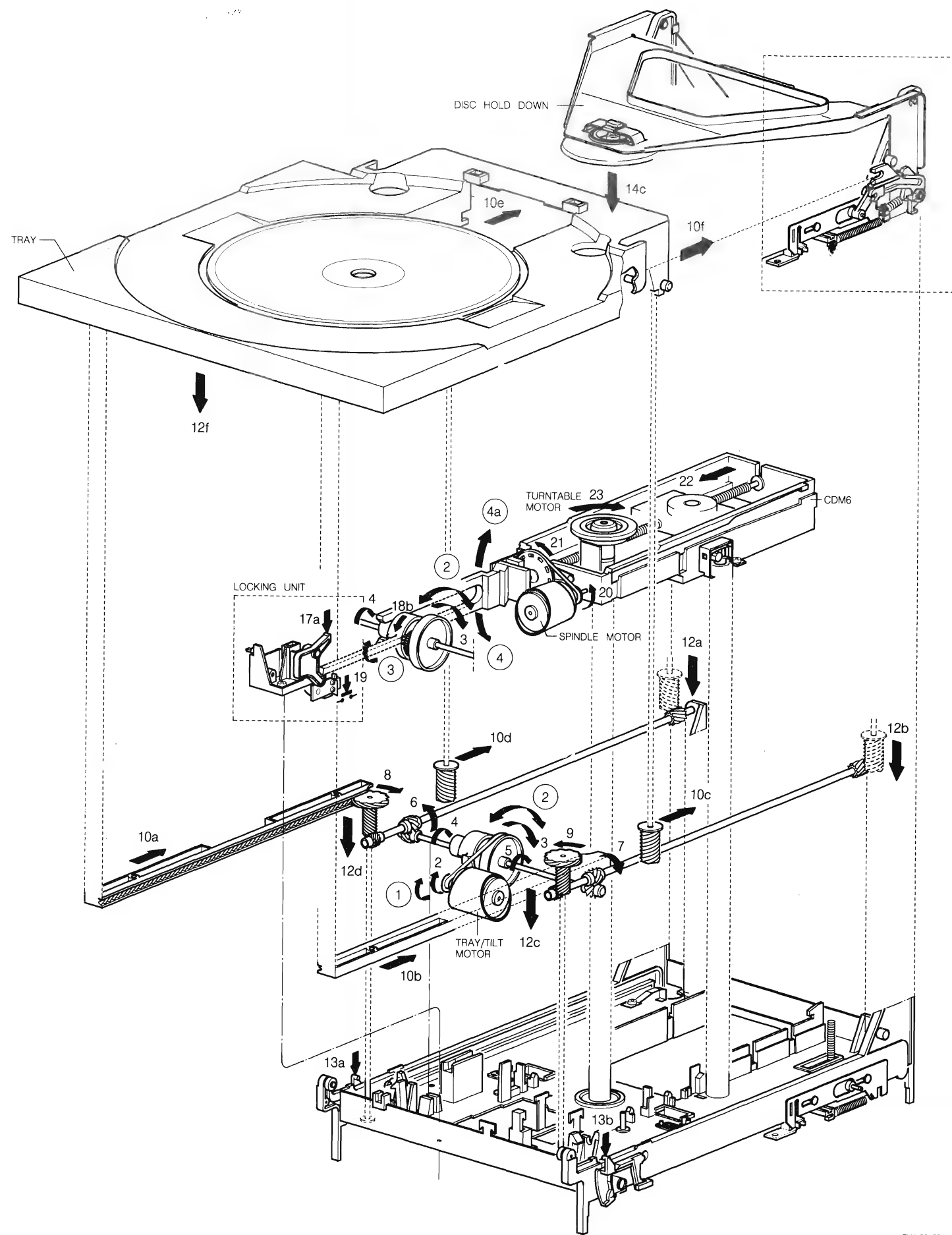
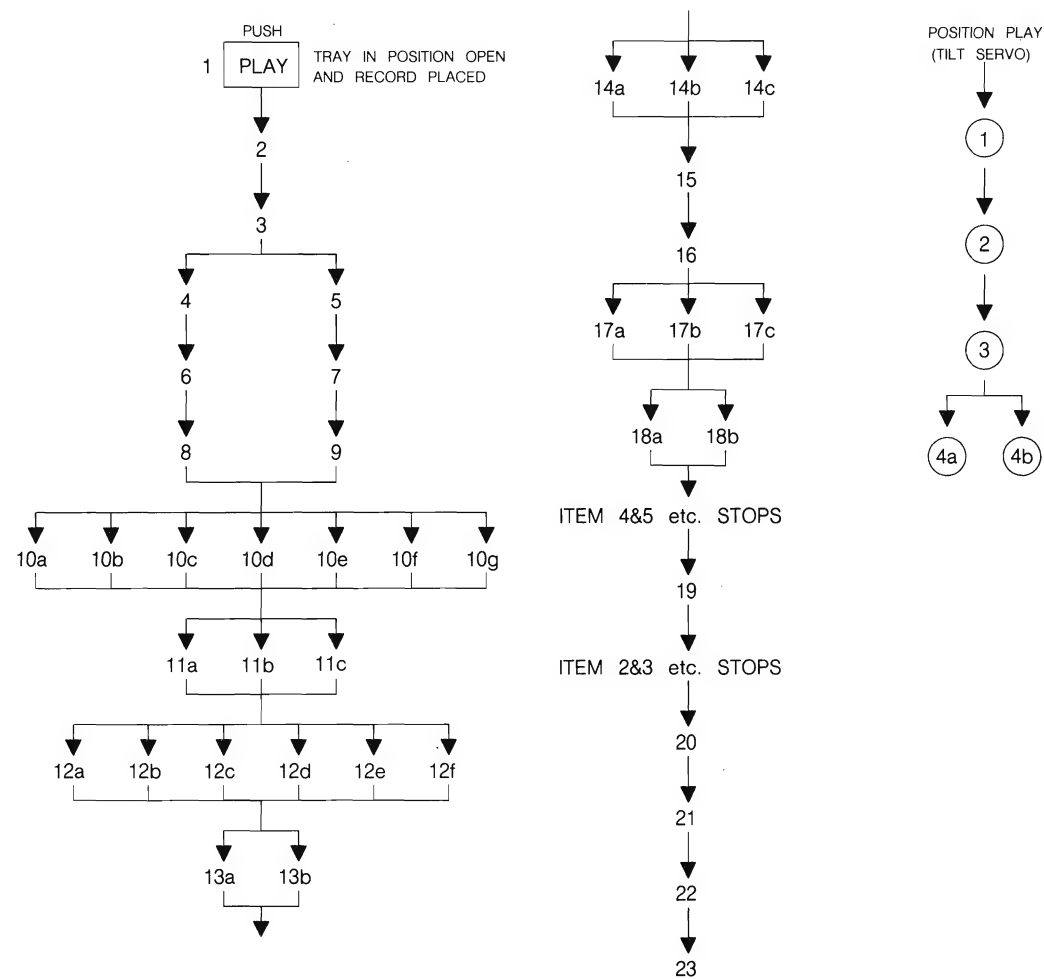
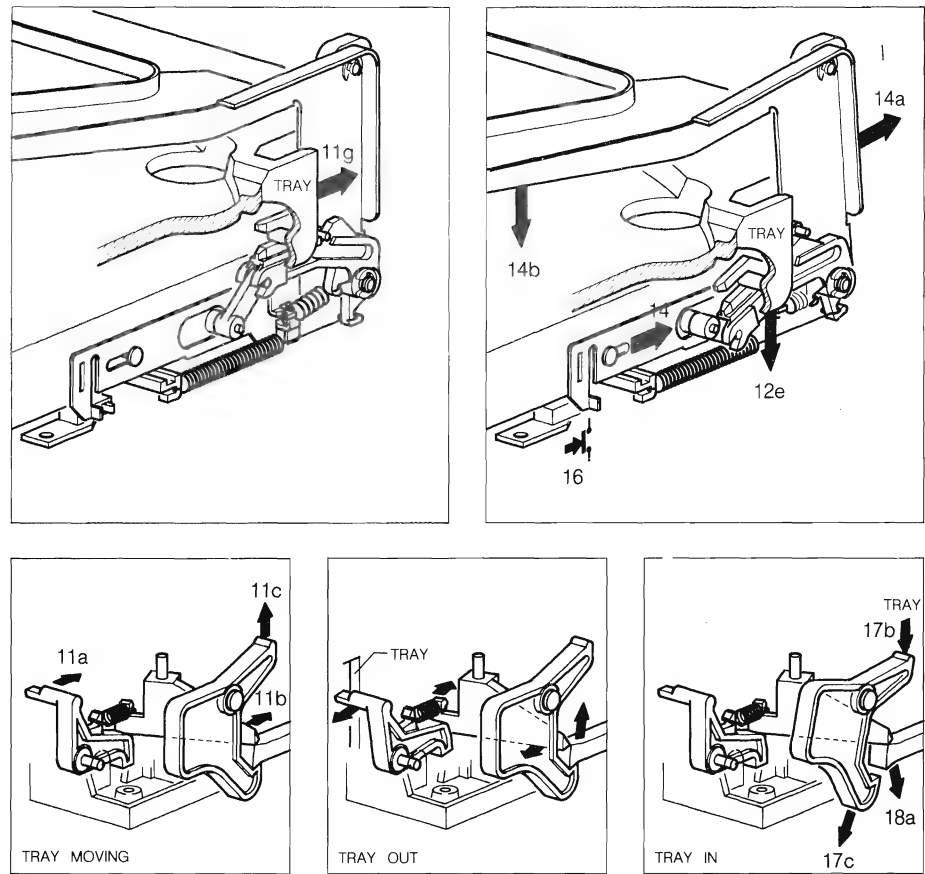
HOOK (C) IN GROOVE (D)

MDA 00862  
T22/42

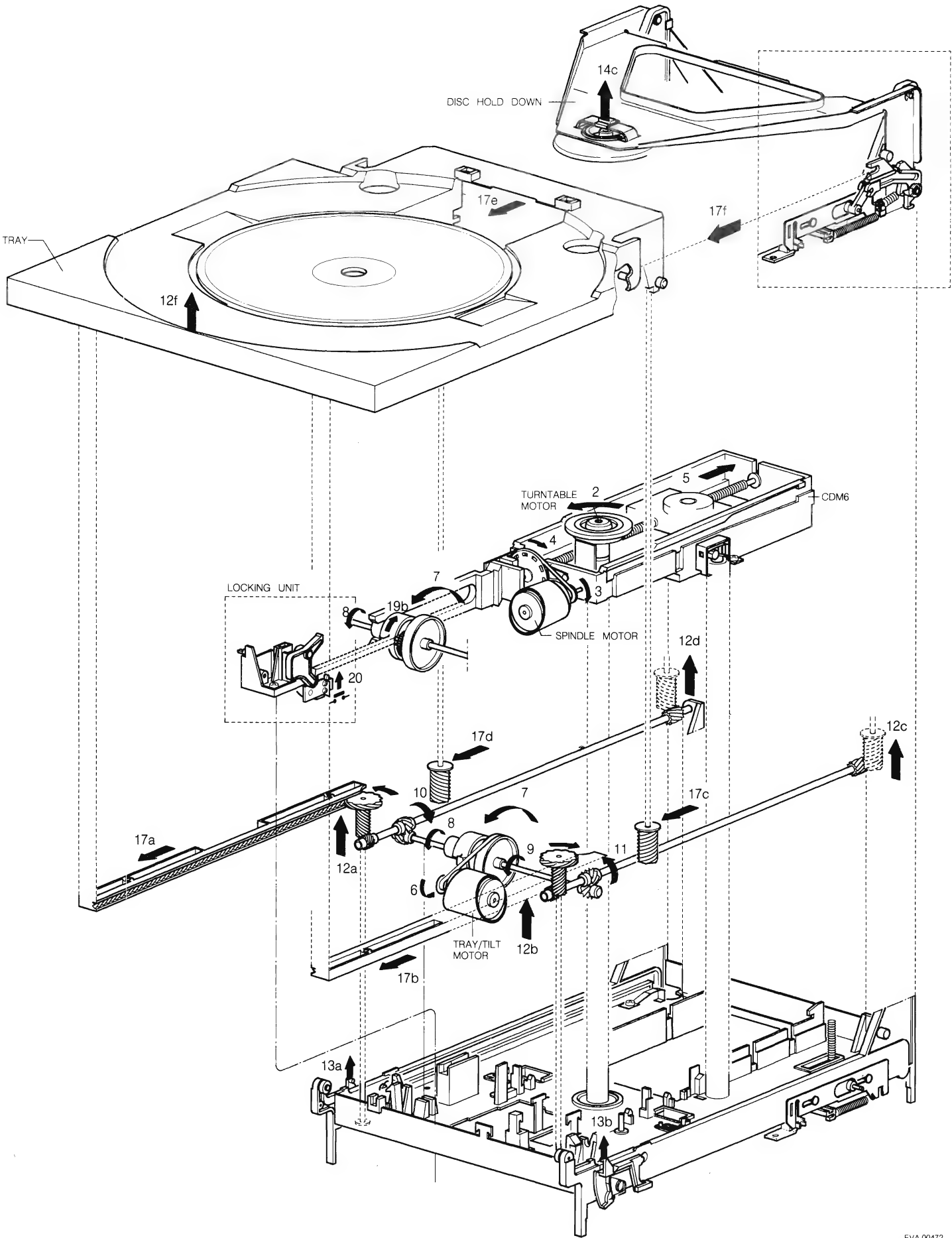
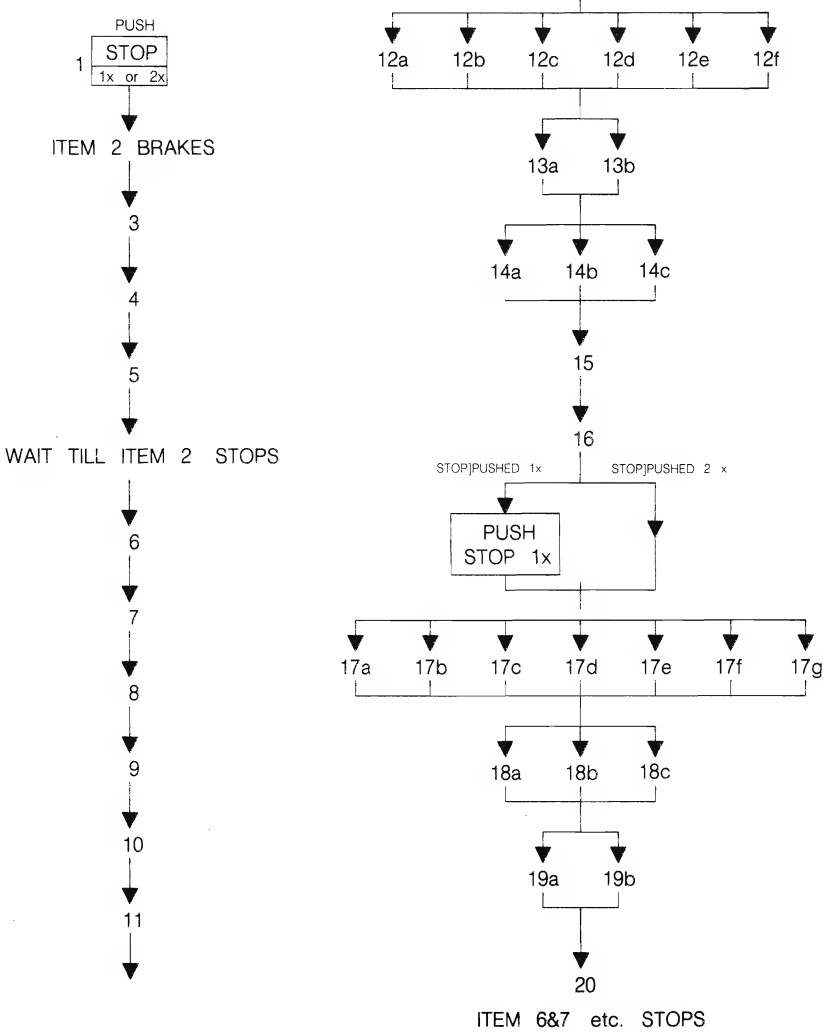
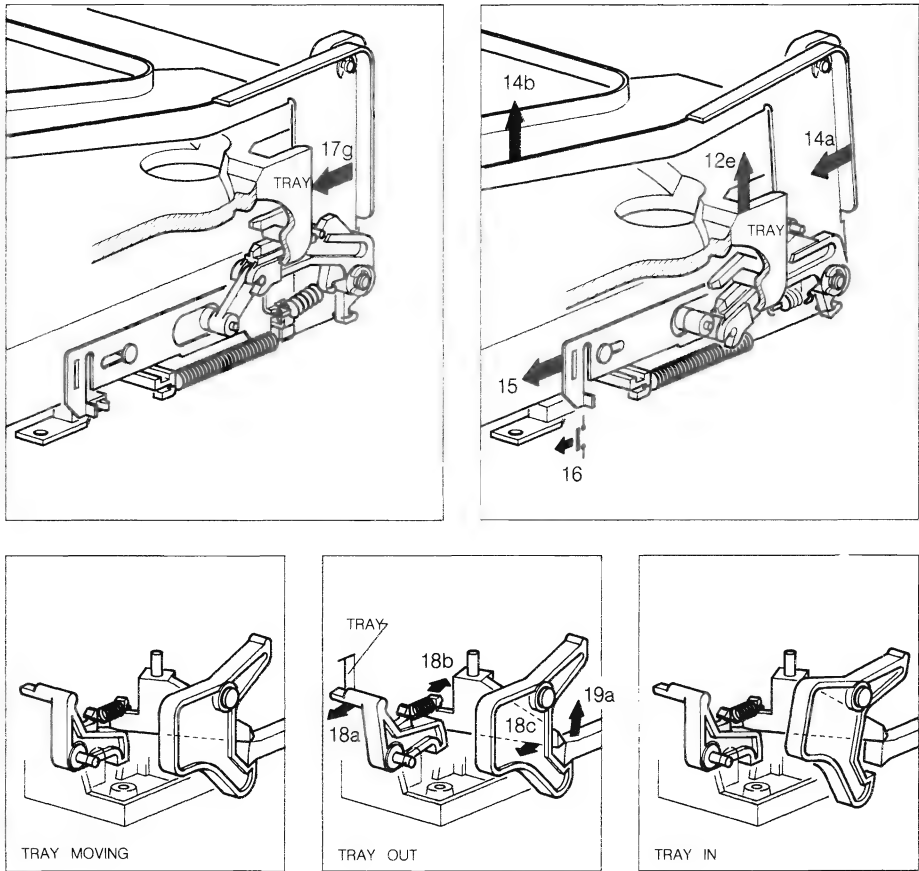


MDA 00862  
T22/42

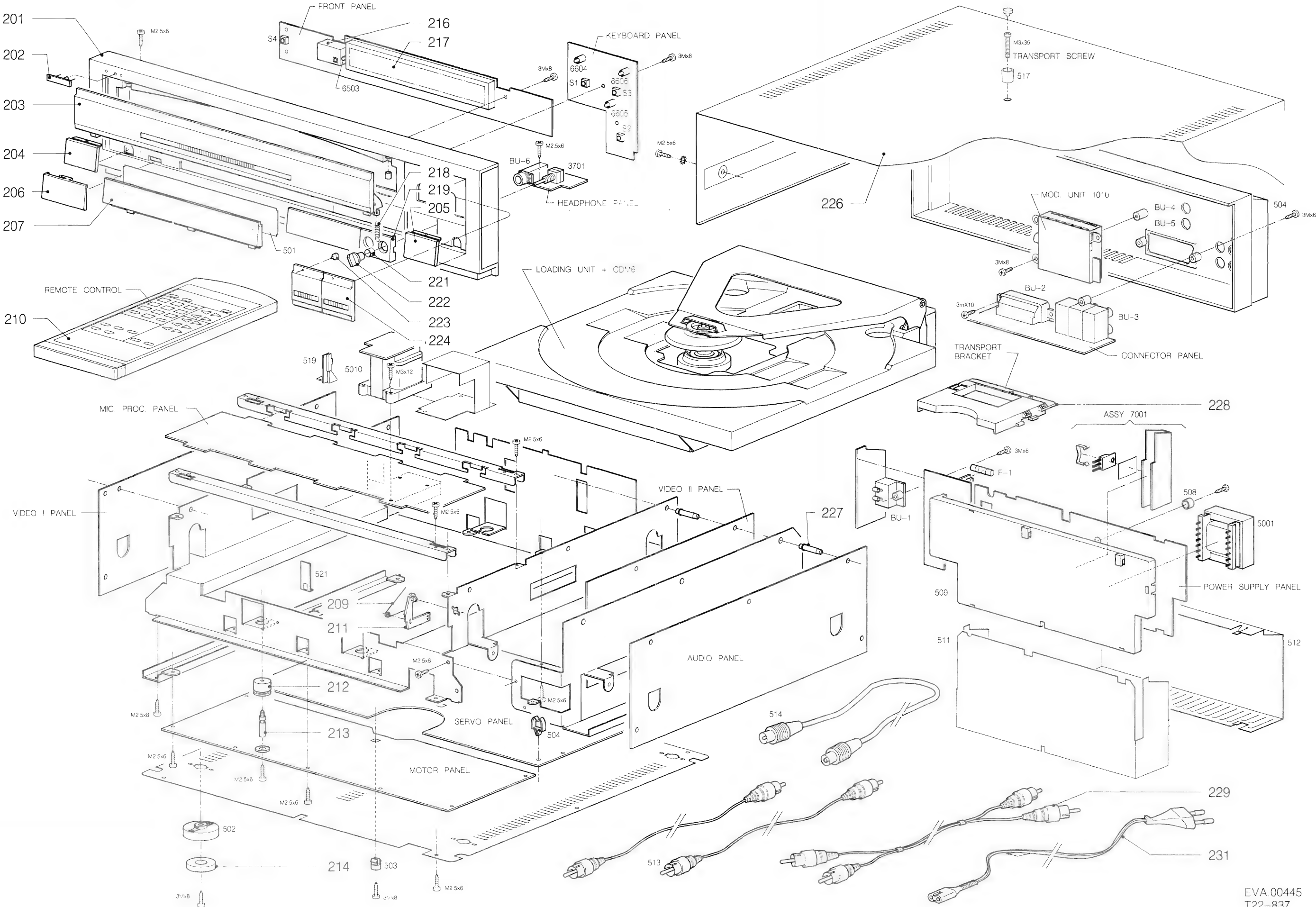














# MECHANICAL PARTS CABINET CDV475

Pos	Code number	Description
S1	4822 276 11276	SWITCH STOP
S2	4822 276 11276	SWITCH PAUSE
S3	4822 276 11276	SWITCH PLAY
S4	4822 276 11896	SWITCH STANDBY
201	4822 444 40273	FRONT ASSY /95B
201	4822 701 10846	FRONT ASSY SILVER /95S
201	4822 444 40231	FRONT ASSY /00R/02R/05R/13R
202	4822 701 10854	WORDMARK/LOGO /95B/95S
202	4822 459 10771	WORDMARK/LOGO /00R/02R/05R/13R
203	4822 444 60539	DOOR ASSY /00R/02R/05R/13R
203	4822 701 10853	DOOR ASSY /95B/95S
204	4822 701 10851	KNOB ASSY STANDBY /95B/95S
204	4822 410 26187	KNOB ASSY STANDBY /00R/02R/05R/13R
205	4822 701 10852	KNOB ASSY PAUSE /95B/95S
205	4822 410 26187	KNOB ASSY PAUSE /00R/02R/05R/13R
206	4822 454 30396	PLATE /00R/02R/05R/13R
206	4822 701 10848	PLATE /95B/95S
207	4822 381 10937	LENS
209	4822 492 32794	SPRING
210	4822 701 10856	REMOTE CONTROL /95B/95S
210	4822 218 20683	REMOTE CONTROL /00R/02R/05R/13R
211	4822 526 50099	PAWL
212	4822 325 60324	GROMMET
213	4822 502 30524	SREW
214	4822 444 30404	PLATE
216	4822 218 10213	RECEIVER
217	4822 130 90495	DISPLAY 6-BT-1072K
218	4822 492 51956	SPRING
219	4822 701 10849	PLATE /95B/95S
219	4822 454 30397	PLATE /00R/02R/05R/13R
221	5322 492 64624	CLAMPING PIECE
222	4822 413 31495	VOLUME KNOB
223	4822 381 10944	LENS
224	4822 701 10847	KNOB ASSY /95B/95S
224	4822 410 26186	KNOB ASSY /00R/02R/05R/13R
226	4822 444 60599	COVER /95B
226	4822 444 60601	COVER /95S
226	4822 444 60538	COVER /00R/02R/05R/13R
227	4822 402 61155	CLAMP
228	4822 402 61156	BRACKET
229	4822 321 22603	CINCH CABLE
231	4822 321 10522	MAINS CABLE /05R
231	4822 321 10457	MAINS CABLE /00R/02R/13R/95B/95S
B-1	4822 267 30639	MAINS CONNECTOR
B-2	4822 267 60172	SCART CONNECTOR
B-3	4822 267 50801	CINCH CONNECTOR
B-6	4822 267 40661	HEADPHONE CONNECTOR
1010	4822 209 72943	MODULATOR 6 MHZ /05R
1010	4822 214 51691	MODULATOR 5.5MHZ /00R/02R/13R/95B/95S
5010	4822 146 30641	STAND BY TRAFO







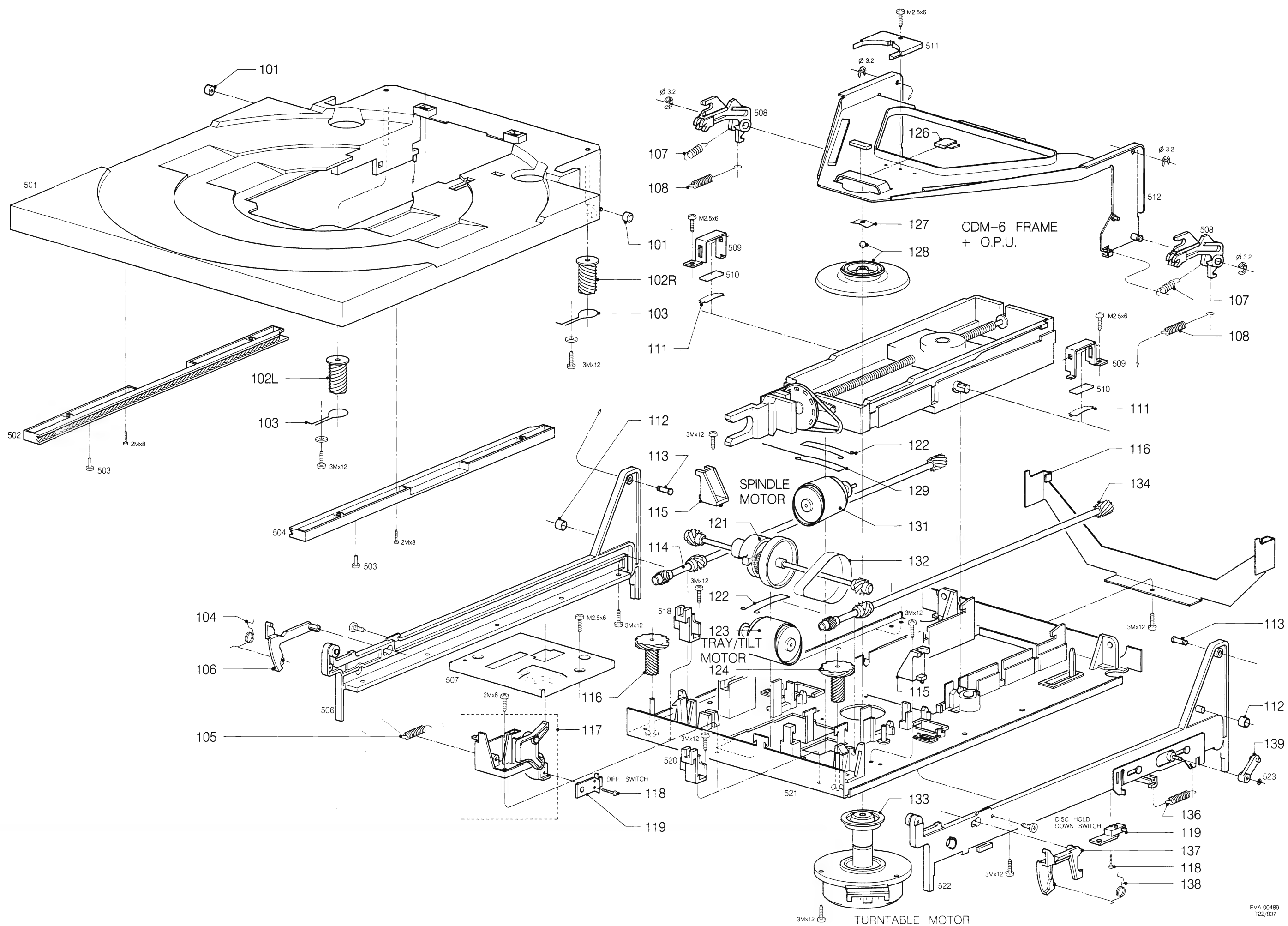
MECHANICAL PARTS CABINET CDV988

Pos	Code number	Descripton
S1	4822 276 11896	SWITCH PUSH PLAY
S2	4822 276 11896	SWITCH PUSH PAUSE
S3	4822 276 11896	SWITCH PUSH STOP
S4	4822 276 11896	SWITCH PUSH STANDBY
201	4822 426 51292	FRONT
203	4822 444 60573	DOOR
204	4822 410 26515	BUTTON POWER
206	4822 454 30409	PLATE ORNAMENT
207	4822 450 61229	WINDOW
209	4822 492 32794	SPRING
210	4822 218 20779	REMOTE CONTROL
211	4822 526 50099	PAWL
212	4822 325 60324	GROMMET
213	4822 502 30524	SCREW
214	4822 454 30387	PLATE
218	4822 492 32882	SPRING
219	4822 381 10998	LENS
223	4822 277 21237	RC-5 SWITCH
224	4822 410 26514	BUTTON
226	4822 444 60575	COVER
227	4822 402 61155	CLAMP
228	4822 402 61156	BRACKET
229	4822 321 22603	CINCH CABLE
231	4822 321 10457	MAINS CABLE /00R
231	4822 321 10522	MAINS CABLE /05R
B-1	4822 267 30639	MAINS CONNECTOR
B-2	4822 267 60172	SCART CONNECTOR
B-3	4822 267 50801	CINCH CONNECTOR
B-6	4822 267 40661	HEADPHONE CONNECTOR
1010	4822 209 72943	MODULATOR 6 MHZ /05R
1010	4822 214 51691	MODULATOR 5,5MHZ /00R
5010	4822 146 30641	STAND BY TRAFO



# EXPLODED VIEW LOADING

6-3 6-3



EVA 00489  
T22/837



## PARTSLIST LOADING

Item	Code number	Description
101	4822 528 70506	
102	4822 522 32375	RIGHT BLACK
102	4822 522 32374	LEFT WHITE
103	4822 492 63788	
104	4822 492 63786	LEFT
105	4822 492 32506	
106	4822 402 61129	
107	4822 492 32867	SPRING
108	4822 492 32783	
111	4822 492 63791	
112	4822 532 51518	
113	4822 535 92392	
114	4822 535 92394	LEFT WHITE
116	4822 522 32372	LEFT WHITE
117	4822 402 30166	
118	4822 502 30505	M 1.6X10
119	4822 271 30597	DIFFERENTIAL SWITCH
121	4822 522 20388	
122	4822 492 63784	
123	4822 361 21025	TRAYTILT MOTOR
124	4822 522 32373	RIGHT BLACK
126	4822 535 92404	
127	4822 492 63823	
128	4822 528 60325	
129	4822 492 63787	
131	4822 361 21038	SPINDLE MOTOR.
132	4822 358 10116	
133	4822 361 21035	TURNTABLE MOTOR ASSY
134	4822 535 92395	RIGHT BLACK
136	4822 492 32781	
137	4822 402 61128	
138	4822 492 63785	RIGHT
139	4822 402 61125	

## MECHANICAL PARTS CDM 6

Item	Codenummer	
158	4822 358 10117	
161	4822 464 50686	
162	4822 214 51669	
163	4822 535 92409	
164	4822 520 30451	
159	4822 691 30195	158+161+162+163+164

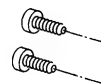
## Interrupterpanel

## Various

6001	4822 130 32114	GP-1S04
6002	4822 130 32114	GP-1S04

CDM-6

158 —

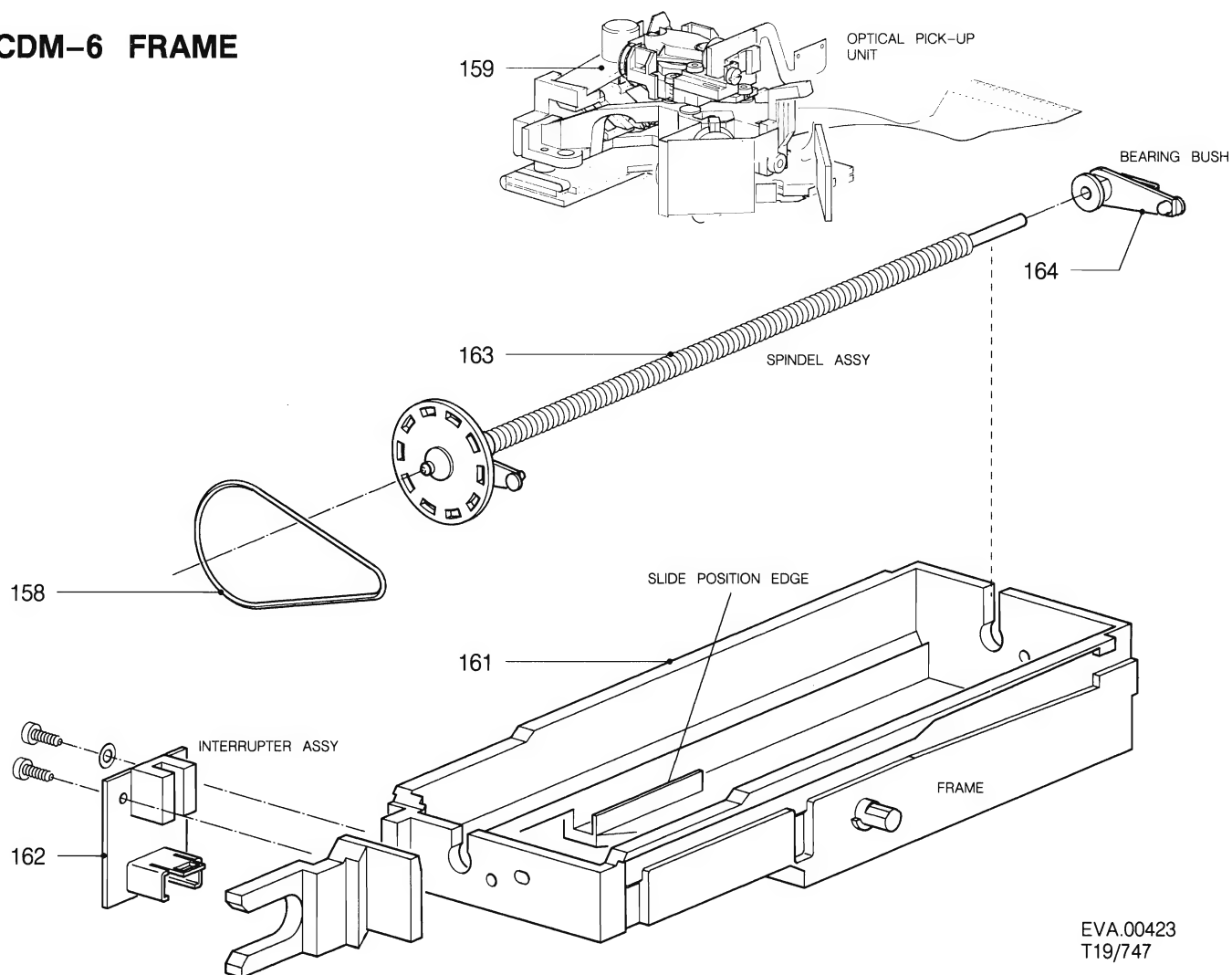


162 —

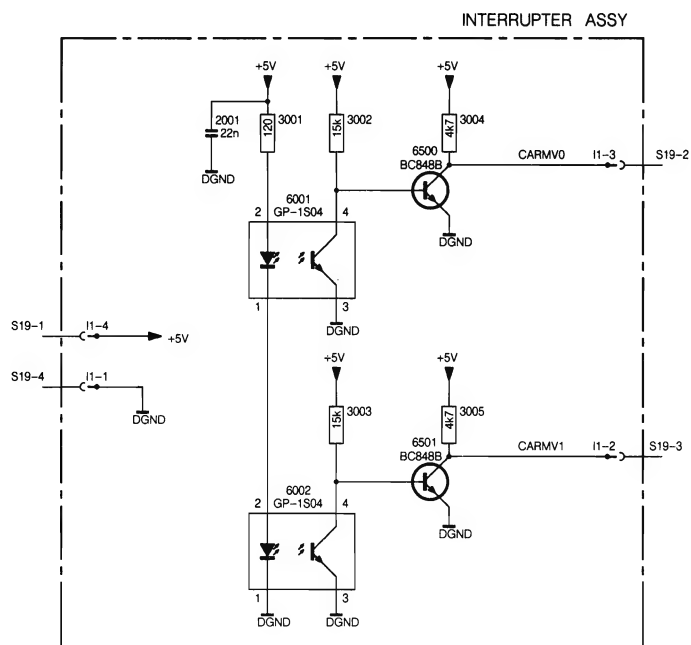


# EXPLODED VIEW CDM

## CDM-6 FRAME

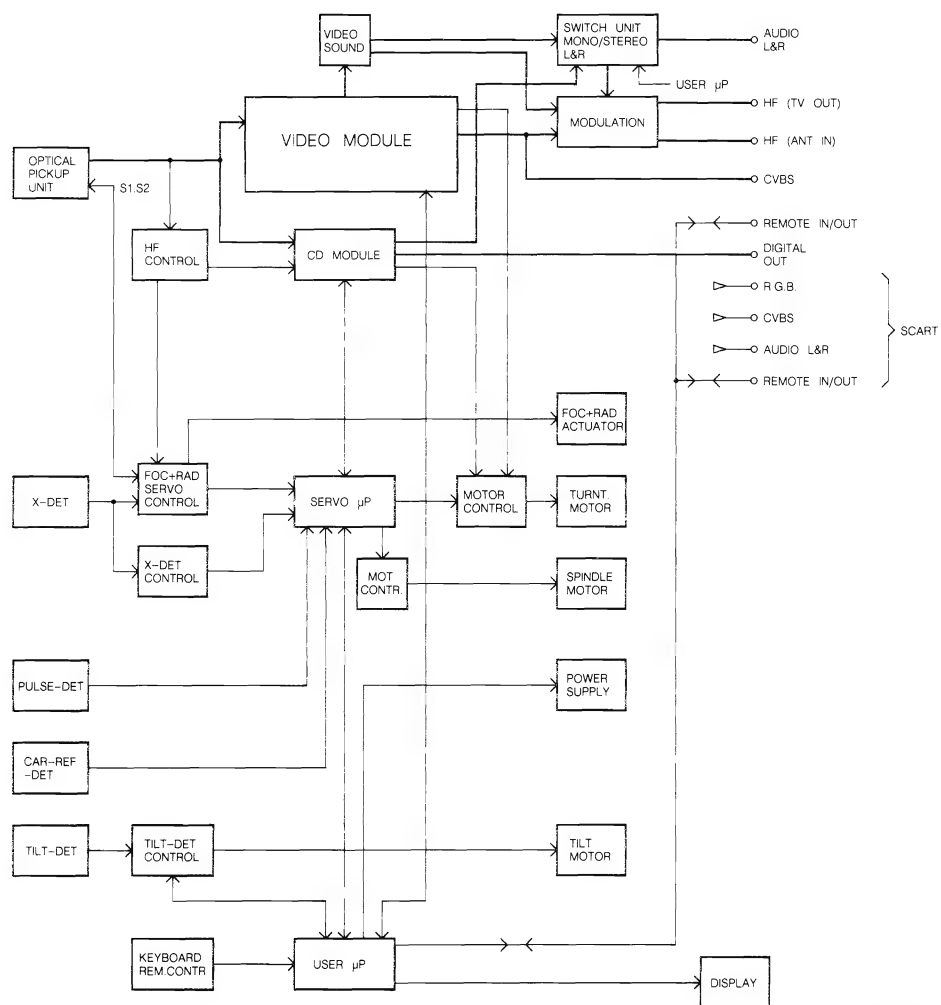


## CIRCUIT DIAGRAM INTERRUPTER PANEL





## 7. OVERALL BLOCKDIAGRAM



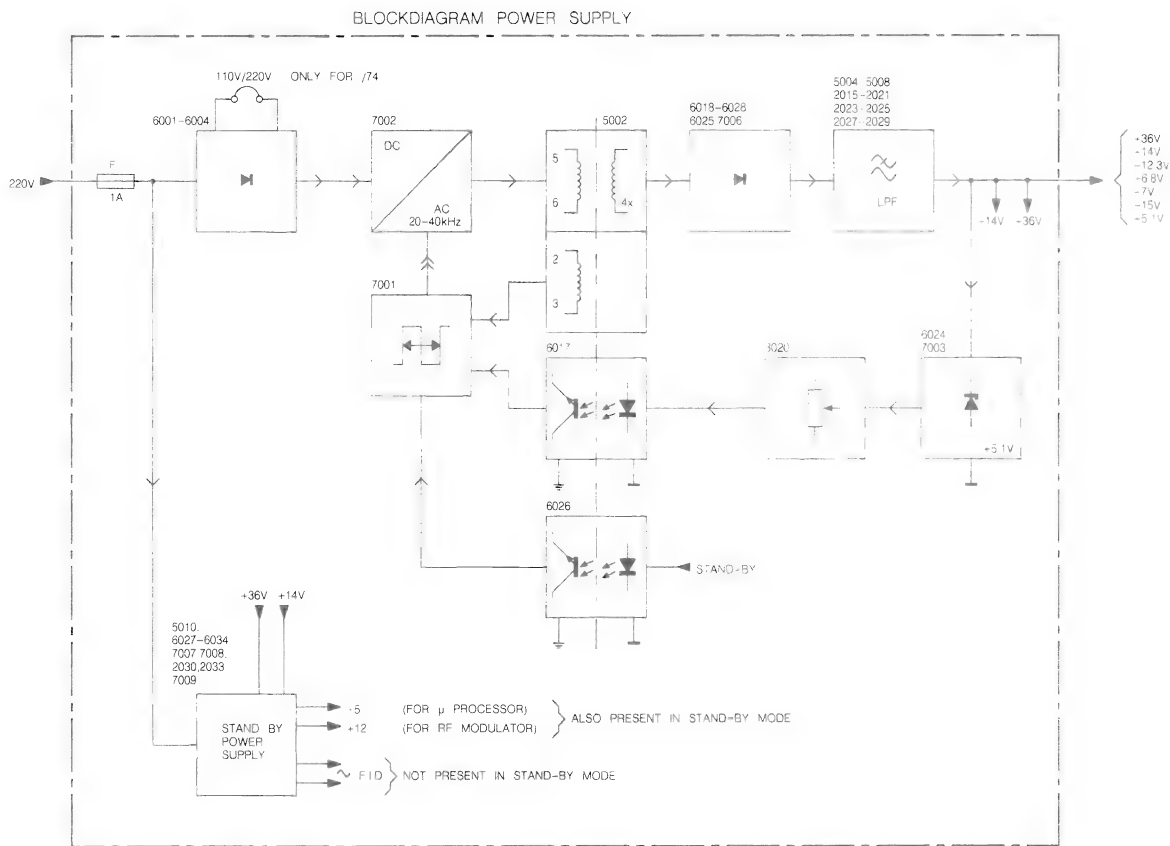
PRS 03212  
T02/746



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8. POWER SUPPLY



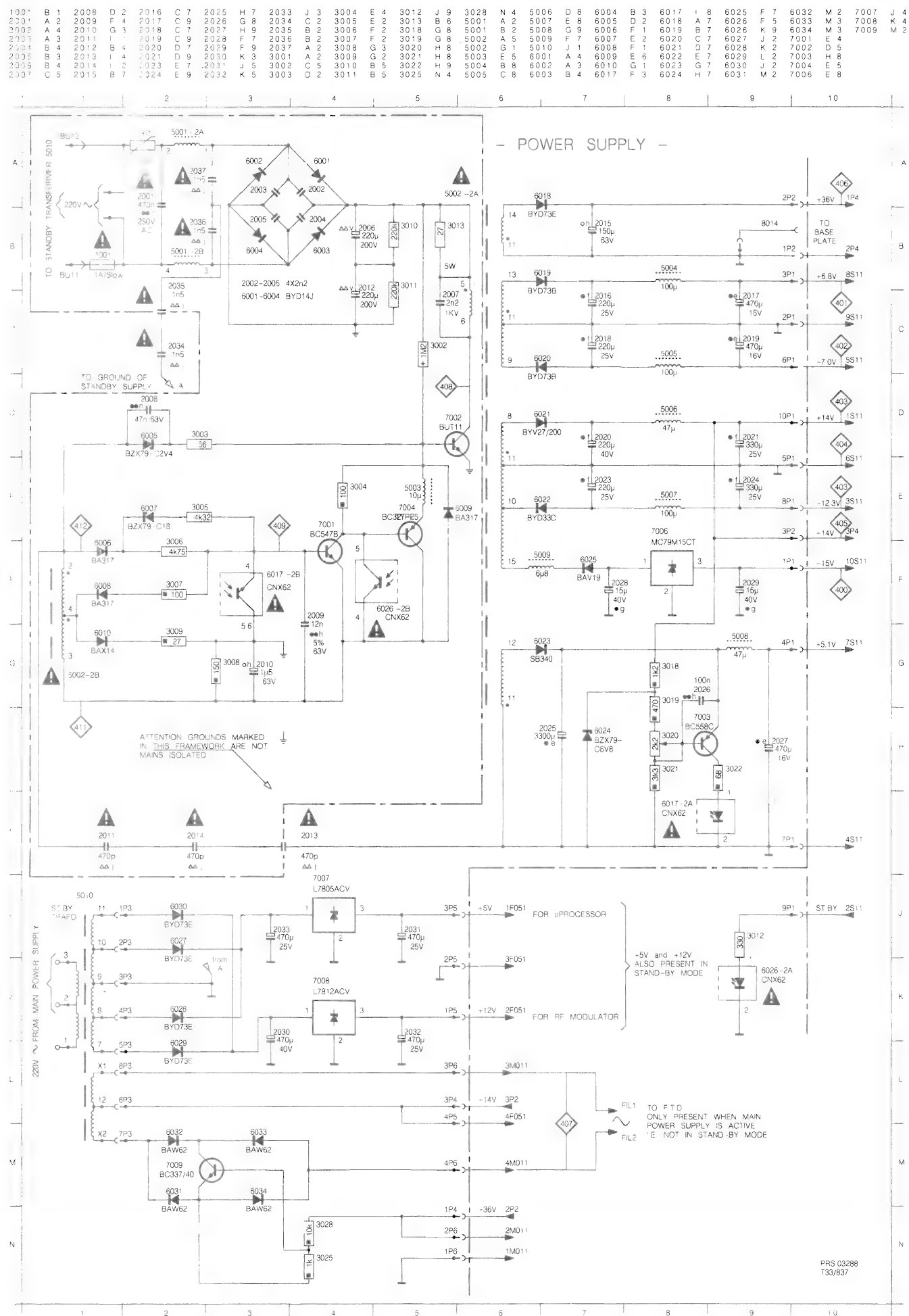
STANDBY TRANSFORMER PANEL

220V

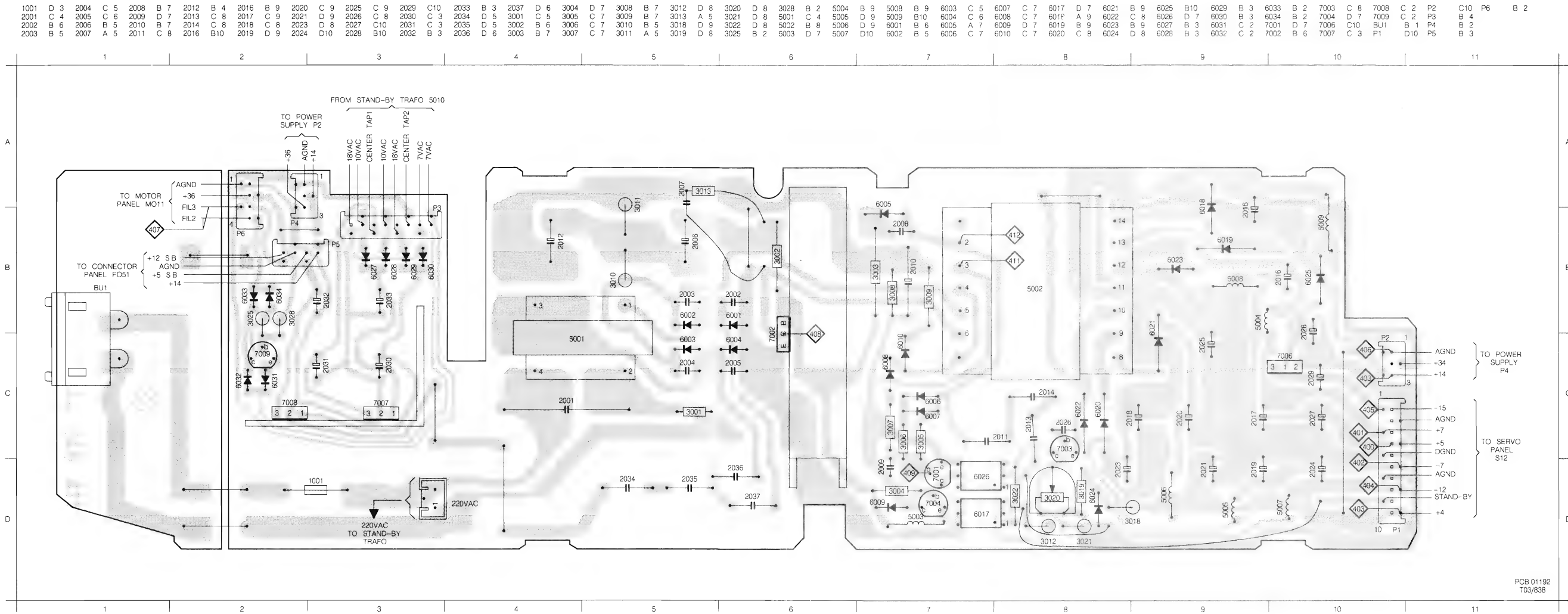
240V










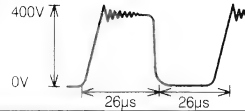


MEASUREMENTS & ADJUSTMENTS

FAULT FINDING POWER SUPPLY

2010	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
	INTERRUPTED	HIGH TONE
5002 SEC.WINDING	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
6026	PRIM/SEC INTERRUPTED	OSCILLATOR START UP
	PRIM/SEC SHORT CIRCUIT	OSCILLATOR START UP
6024	SHORT CIRCUITED	OSCILLATOR START UP
7003	CE SHORT CIRCUITED	OSCILLATOR START UP
6018-6023	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
7001 OR 6009	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
6005 OR 2008	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
6007 OR 6008	SHORT CIRCUITED	OSCILLATOR START UP



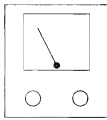
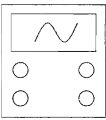
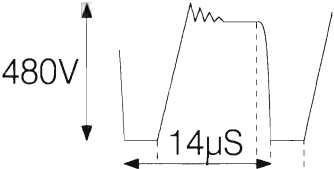
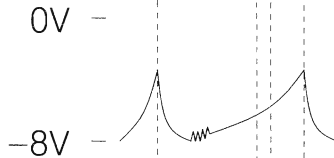
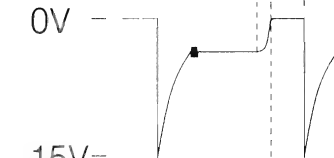
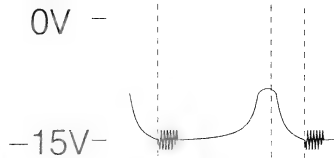
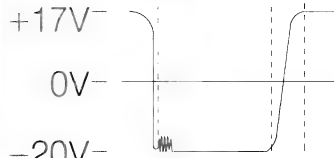
SERVICING HINTS POWER SUPPLY

STEP	COMPONENT	MODE	
1		POWER SUPPLY OPERATES ONLY WITH SECONDARY LOAD!	
2	SECONDARY LOAD	CHECK FOR SHORT CIRCUIT SECONDARY SIDE 5002	
3	7001	INTERRUPT BASIS	
4		MAINS INPUT 80V AC VIA VARIAC	
5	C-7002 	OSCILLATOR START UP	



# MEASUREMENTS & ADJUSTMENTS

AGRAM

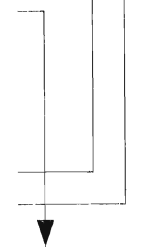
STEP	SIGNAL	MODE					REMARKS
1	+5	"ON"	400	3020	$5.1V \pm 0.025V$		
	+6.8	"ON"	401		$+6.77 \pm 0.10$		
	-7.0	"ON"	402		$-6.99 \pm 0.10$		
	+1.4	"ON"	403		$+13.97 \pm 0.15$		
	-12.3	"ON"	404		$+12.33 \pm 0.15$		
	-15	"ON"	405		$-15.0 \pm 0.75$		
	+36	"ON"	406		$+36.14 \pm 0.40$		
	+5.4AE	"ON"	407		$+5.3 \pm 0.30AC$		
	UCE 7002	"ON"	408				
	UB 7001		409				
	UB 7002		410				
	3-5002		411				
	2-5002		412				

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





V. SY

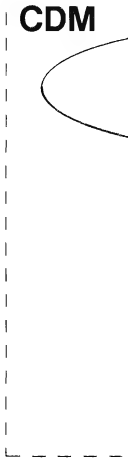
JDIO  
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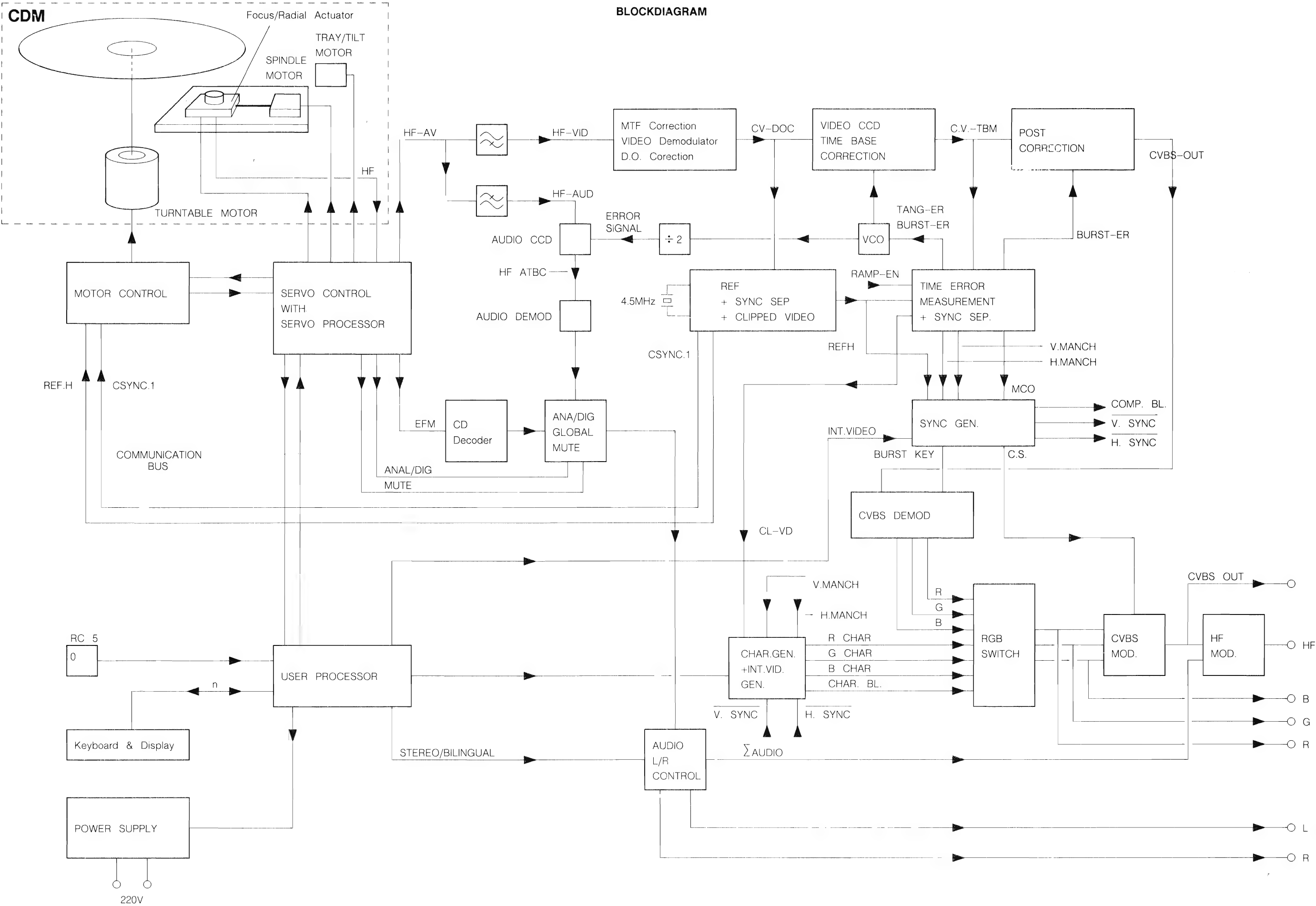
POWERSUPPLY 3122 137 21170

	1001   4822 253 30021   FUSE 1.0 A SLOW		4822 130 80229   BYD14J 4822 130 30847   BA317 4822 130 34193   BAX 14 4822 130 60779   BYD73E 4822 130 60778   BYD73B 4822 130 42488   BYD33D 4822 130 32715   SB 340 4822 130 30967   BAV19 4822 130 31253   BZX79-C2V4 4822 130 31024   BZX79-C18 4822 130 34278   BZX79-C6V8
	2001   4822 121 50627   POLCAP 250V 470NPM10 2006   4822 124 22354   ELCAP 200V 220MPM20 2007   4822 122 32071   1KV 2N2 PM10 2009   4822 121 51165   12N PM5 2011   4822 122 33284   470P PM20 2012   4822 124 22354   ELCAP 200V 220MPM20 2013   4822 122 33284   470P PM20 2014   4822 122 33284   470P PM20 2025   4822 124 22352   ELCAP 16V 3300 µF PM20		4822 130 40959   BC547B 4822 130 42229   BUT11 5322 130 60068   BC558C 4822 130 41246   BC327-25 4822 130 41344   BC337-40
	3001   4822 116 30069   NTC 82R/25PQPM20 3005   4822 116 80507   4K32 PM1 3006   4822 116 80507   4K75 PM1 3010   5322 116 60459   220K PM5 3011   5322 116 60459   220K PM5		5322 209 86361   MC79M15CT 4822 209 72743   L7805 4822 209 72742   L7812 4822 130 90121   CNX62
Various	5001   4822 142 40315   MAINS FILTER 5002   4822 146 30617   TRANSFORMER 5010   4822 146 30641   STANDBY TRAFO		



REF













Block diagram  
CDV combi player









## MEASUREMENTS &amp; ADJUSTMENTS VIDEO &amp; MTF

STEP	SIGNAL	MODE					REMARKS
1	HF IN	STOP	100	5106		MIN AMPLITUDE	DISCONNECTED V24 INJECT 875 kHz $\approx 80$ mVpp IN 2V24
2	MTF 8MHz ADJ	STOP	101	5107		MAX AMPLITUDE	DISCONNECTED V24 INJECT 8 kHz $\approx 40$ mVpp IN 2V24
3	AUDIO 2.8MHz SUPPRESSION	STOP	102	5102		MIN AMPLITUDE	DISCONNECTED V24 INJECT 2.8 kHz $\approx 40$ mVpp
4	MTF GAIN	VIDEO TEST DISC PICT NR 515 STILL PICTURE	103	3145		SEE DRAWING MDA 01556	ADJUST FOR MULTI BURST $\pm$ MULTI BURST VI

## MEASUREMENTS &amp; ADJUSTMENTS DROP-OUT CIRCUIT

STEP	SIGNAL	MODE					REMARKS
1	FREQUENCY	STOP	109	5105	FREQUENCY COUNTER 13.3MHz		COARSE
2	DELAY-TIME	VIDEO TEST DISC PICT NBR 10800	A-103 B-111	5105		A CHANNEL B CHANNEL	FINE ADJUST DELAY TIME BETWEEN EA AND B FOR 64 $\mu$ s
3	AMPLITUDE DELAYED VIDEO	VIDEO TEST DISC PICT NR 10800	A-103 B-111	3131		A CHANNEL B CHANNEL	ADJUSTMENT THE AMPLITUDE TO BE EQUAL FOR A AND B

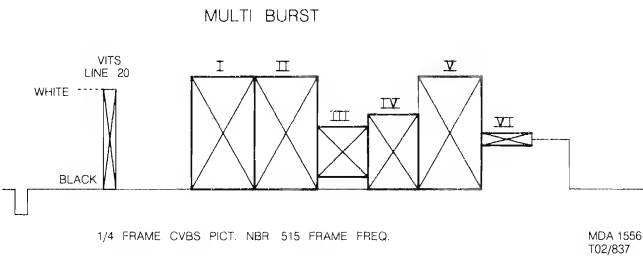
## MEASUREMENTS &amp; ADJUSTMENTS VIDEO

STEP	SIGNAL	MODE					REMARKS
1	DC-LEVEL	VIDEO TEST DISC PICT NBR 6000 STILL PICTURE	104	3210		2.2V	
2	VIDEO AMPLITUDE	VIDEO TEST DISC PICT NBR 6000 STILL PICTURE	106	3152		U=1.2Vpp	
3	VIDEO AMPLITUDE	VIDEO TEST DISC PICT NBR 6000 STILL PICTURE	107			U=1.85Vpp-2Vpp	
4	VIDEO AMPLITUDE	VIDEO TEST DISC PICT NBR 6000 STILL PICTURE	108			U=2.7Vpp-3Vpp	





## MEASUREMENTS &amp; ADJUSTMENTS TIME-BASE CONTROL

STEP	SIGNAL	MODE					REMARKS
1	FREQUENCY	STOP	112	2313	FREQUENCY COUNTER		AFTER 2 MINUTES WARMING UP 15.625,024- 15.624,975Hz
2	VCO	STOP 9-7006 GROUNDED TO EARTH	103 104	3234		A- CHANNEL B- CHANNEL	DELAY TIME BETWEEN A AND B $\pm 70 \mu$ s
3	SPECIAL BURST SUPPRESSION	VIDEO TEST DISC PICT NBR 750	114 116	5113		TRIGGER SIGNAL 116	MIN AMPLITUDE OF THE SPECIAL BURST
4	SPECIAL BURST AMPLITUDE	VIDEO TEST DISC PLAY	117	5401			MAX AMPLITUDE OP. SPECIAL BURST
5	BURST ERROR	VIDEO TEST DISC PICT NBR 170 STILL PICTURE		2369			MIN STRIPES IN RED PICTURE ON TV SCREEN
	BURSTKEY	PLAY	118			8.5V $\pm 1$ V	
	C SYNC	PLAY	116			5V $\pm 1$ V	
	H MARCH	PLAY	119			5V $\pm 250$ mV -500 mV	15625Hz $\pm 1$ kHz
	V MARCH	PLAY	121			5V $\pm 250$ mV -500 mV	50Hz $\pm 5$ Hz
	MCO	PLAY	122			10V $\pm 1$ 5V	DUTY CYCLE 32 $\mu$ s $\pm 8 \mu$ s












PARTSL

	1001
	
	
	3131
	3145
	3152
	3210
	3234
	3269
	5101
	5102
	5103
	5104
	5105
	5106
	5107
	5112
	5113
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	5204
	5205
	5206
	5207
	5208
	5401
	5111
	5114
	



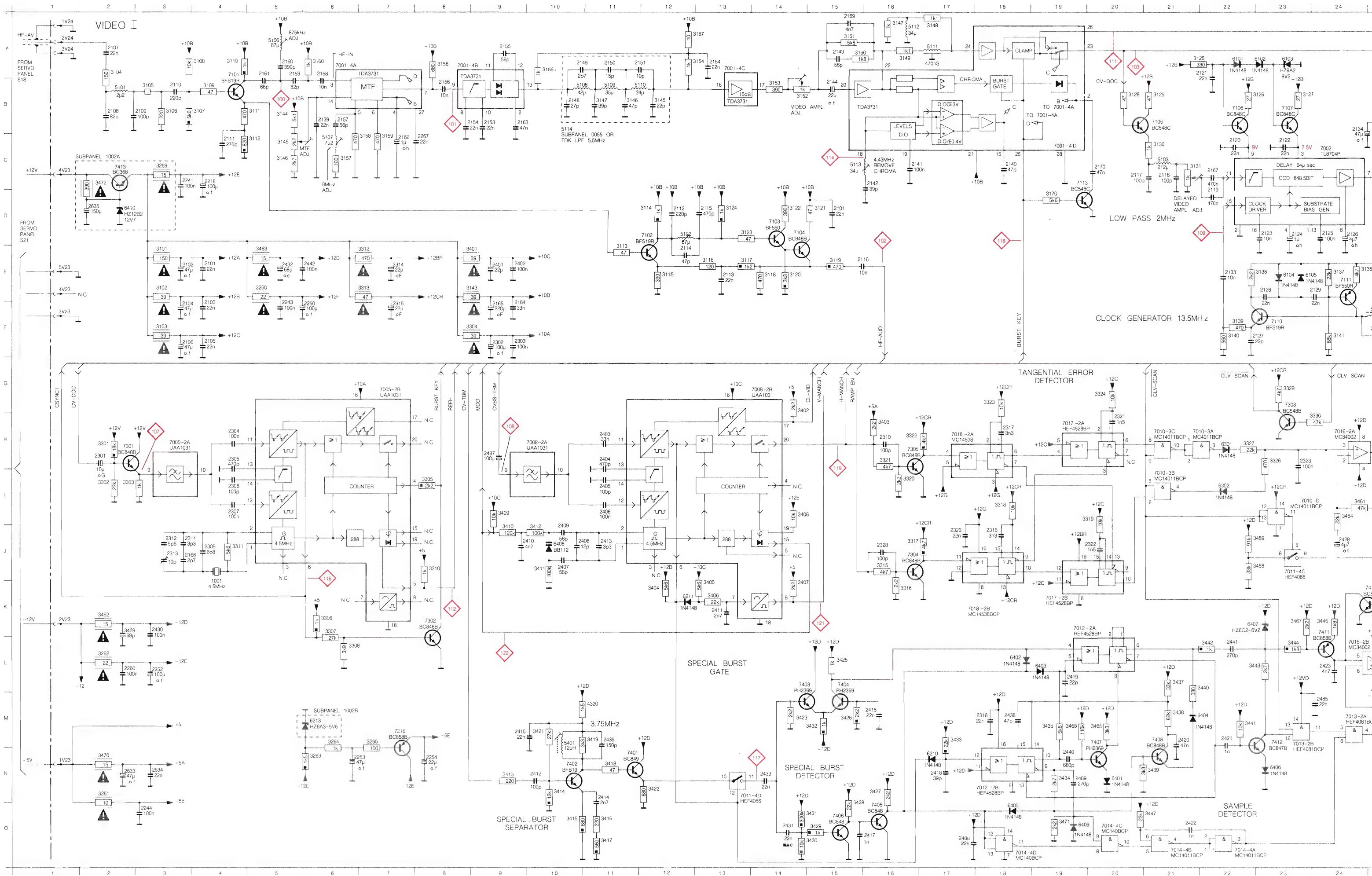
## PARTSLIST VIDEO I-4

	1001 4822 242 70361 X-TAL 4.5 MHZ		6101 4822 130 33294 HZ9A2 8V2 6201 5322 130 34865 BZV46 1V5 6202 4822 130 33294 HZ9A2 8V2 6209 4822 130 32566 HZ11A3 10V0 6212 4822 130 32697 HZ6A3 5V6 6213 4822 130 32697 HZ6A3 5V6 6407 4822 130 32698 HZ6C2 6V2 6410 5322 130 32026 HZ12B2 7001 4822 209 72757 IC TDA3731/N1 7002 4822 209 11412 TL8704P 7003 4822 209 71275 CXL5001 7004 5322 209 82575 PC74HC74P 7005 4822 209 71316 UAA1031 7006 4822 209 71825 PA0017 7007 4822 209 71276 CXL1004 7008 4822 209 71316 UAA1031 7009 4822 209 81349 MC1458P1 (MTLA) 7010 4822 209 10247 MC14011BCP 7011 5322 209 10357 HEF4066BP 7012 4822 209 10866 HEF4428BP 7013 4822 209 10053 MC14081BCP 7014 4822 209 10247 MC14011BCP 7015 4822 209 71382 MC34002BP 7016 4822 209 71382 MC34002BP 7017 4822 209 10866 HEF4428BP 7018 4822 209 81091 MC14538BCP
	4822 122 33325 CHIP 470N 16V 4822 122 10166 TUBULAR 22N 16V 4822 122 33142 POLYESTER 6P8 4822 122 33141 POLYESTER 3P3 4822 122 32148 POLYESTER 5P6 4822 125 50062 TRIMMING CAPACITOR 10PF 5322 122 32933 1NF 5%NP0 50V 4822 122 32891 POLYESTER 68N 50V		4822 130 42353 BFS19 4822 130 42131 BF550 5322 130 41982 BC848B 4822 130 44196 BC548C 4822 130 60516 BC859C 4822 130 42513 BC858C 5322 130 44336 BSV52 5322 130 41983 BC858B 4822 130 40938 BC548 4822 130 42711 BC849B 4822 130 41594 PH2369 4822 130 60511 BC847B 5322 130 44647 BC368
	4822 111 30517 SAFETY RESISTOR 22E 4822 111 30508 SAFETY RESISTOR 10E 4822 111 30526 SAFETY RESISTOR 47E 4822 111 30513 SAFETY RESISTOR 15E 4822 111 30524 SAFETY RESISTOR 39E 3131 4822 100 11214 TRIMMING POTENTIOMETER 1K 3145 5322 101 14008 TRIMMING POTENTIOMETER 2K2 3152 4822 100 10254 TRIMMING POTENTIOMETER 1K 3210 4822 100 11214 TRIMMING POTENTIOMETER 1K 3234 4822 101 10859 TRIMMING POTENTIOMETER 10K 3269 4822 100 11214 TRIMMING POTENTIOMETER 1K		
	5101 4822 157 53266 COIL 3μH 5102 4822 156 10994 COIL 87μH 5103 4822 156 11007 COIL 212μH 5104 4822 156 11007 COIL 212μH 5105 4822 156 10997 COIL 1.7μH 5106 4822 156 21054 COIL 87μH 5107 4822 156 21147 COIL 7.2μH 5112 4822 156 21026 COIL 34 μH 5113 4822 156 21026 COIL 34 μH 5201 4822 156 11002 COIL 7.7μH 5202 4822 156 10998 COIL 3 μH 5203 4822 156 11001 COIL 6 μH 5204 4822 156 11001 COIL 6 μH 5205 4822 156 11001 COIL 6 μH 5206 4822 156 11001 COIL 6 μH 5207 4822 156 11001 COIL 6 μH 5208 4822 156 10998 COIL 3 μH 5401 4822 156 11003 COIL 12μH 5111 4822 320 40081 DELAY LINE 470 NSEC 5114 4822 157 53267 LOWPASSFILTER 5.5MH		
	4822 130 30621 1N4148 4822 130 32227 BB112		



		
	6101 4822 130 33294	HZ9A2 8V2
	6201 5322 130 34865	BZV46 1V5
	6202 4822 130 33294	HZ9A2 8V2
	6209 4822 130 32566	HZ11A3 10V0
	6212 4822 130 32697	HZ6A3 5V6
	6213 4822 130 32697	HZ6A3 5V6
	6407 4822 130 32698	HZ6C2 6V2
	6410 5322 130 32026	HZ12B2
	7001 4822 209 72757	IC TDA3731/N1
PF	7002 4822 209 11412	TL8704P
	7003 4822 209 71275	CXL5001
	7004 5322 209 82575	PC74HC74P
	7005 4822 209 71316	UAA1031
	7006 4822 209 71825	PA0017
	7007 4822 209 71276	CXL1004
	7008 4822 209 71316	UAA1031
	7009 4822 209 81349	MC1458P1 (MTLA)
	7010 4822 209 10247	MC14011BCP
	7011 5322 209 10357	HEF4066BP
TER	7012 4822 209 10866	HEF4428BP
	7013 4822 209 10053	MC14081BCP
TER	7014 4822 209 10247	MC14011BCP
	7015 4822 209 71382	MC34002BP
TER	7016 4822 209 71382	MC34002BP
	7017 4822 209 10866	HEF4428BP
TER	7018 4822 209 81091	MC14538BCP
TER		
TER	4822 130 42353	BFS19
	4822 130 42131	BF550
	5322 130 41982	BC848B
	4822 130 44196	BC548C
	4822 130 60516	BC859C
	4822 130 42513	BC858C
	5322 130 44336	BSV52
	5322 130 41983	BC858B
	4822 130 40938	BC548
	4822 130 42711	BC849B
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	4822 130 60511	BC847B
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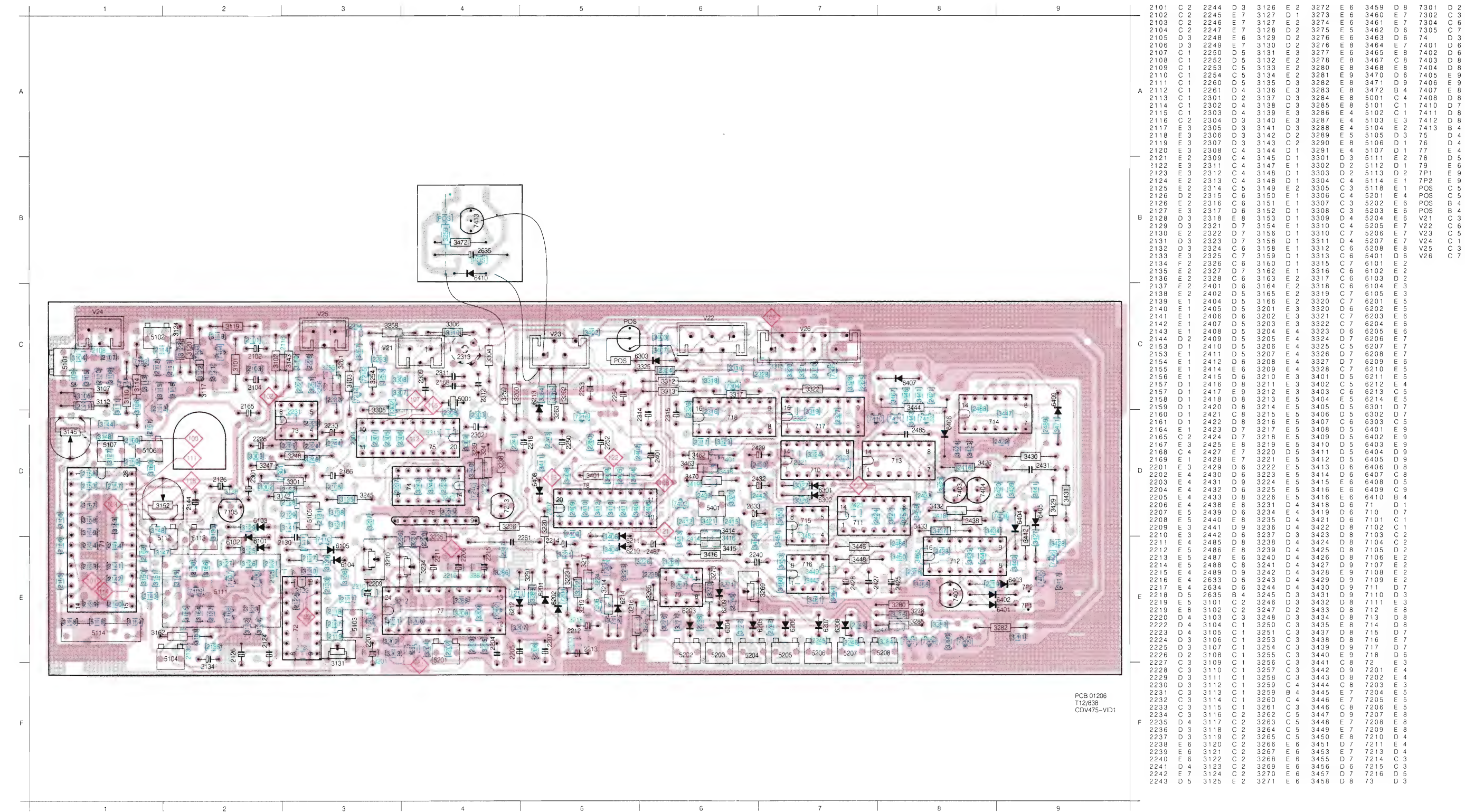




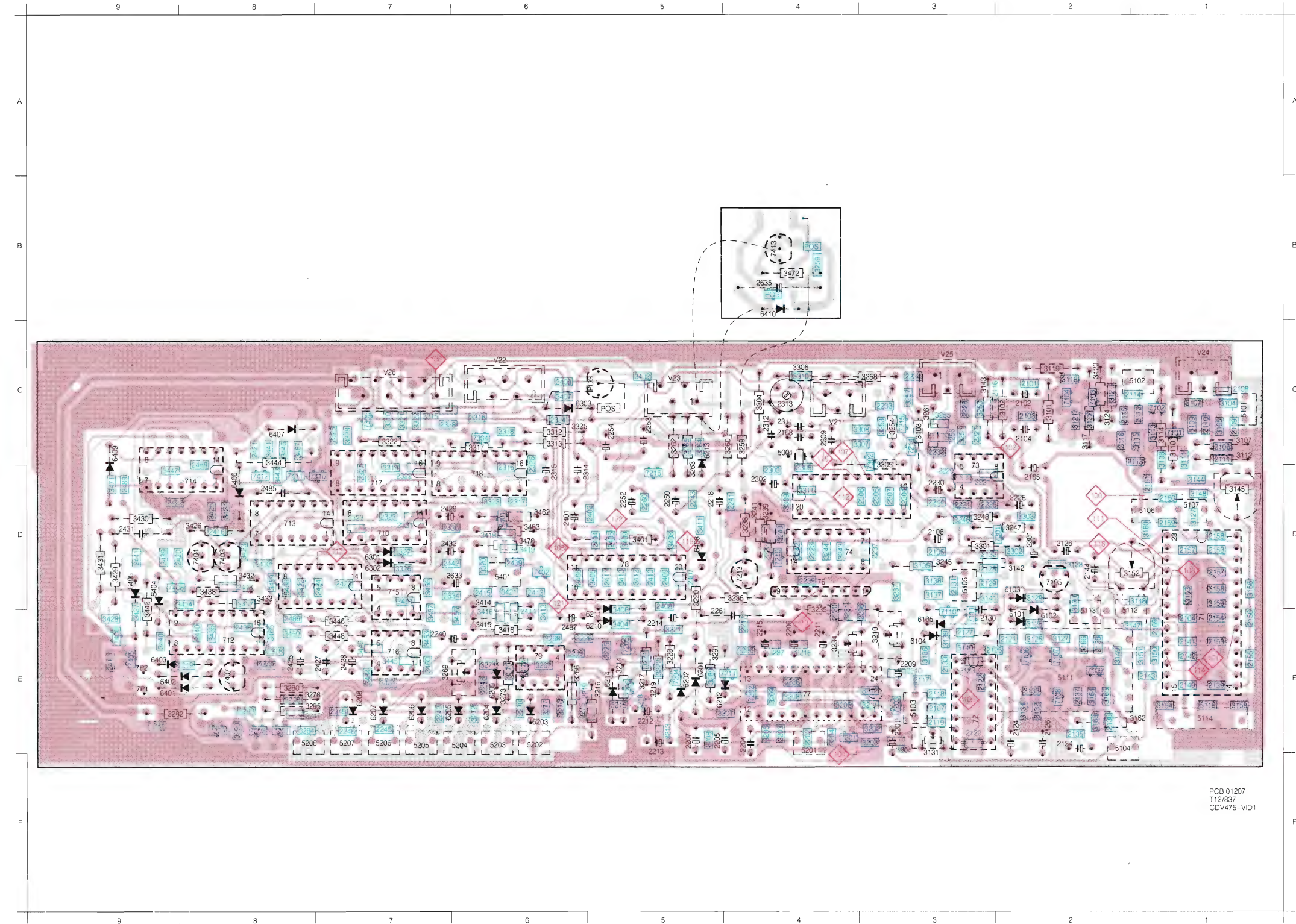


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2106	F	3	2408	J11	3246	I30	5111	A17	
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2109	B	3	2411	K13	3251	L29	5114	B10	
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2117	C20	2419	L19	3260	E	5	5208	F37	
2118	C21	2420	M21	3261	N	2	5401	M10	
2119	C22	2421	M22	3262	L	2	6101	A22	
2120	C22	2422	O21	3263	N	2	6102	A23	
2121	A22	2423	L24	3264	M	6	6103	A23	
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2130	E25	2433	N14	3273	H35	6207	G36		
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2132	F26	2439	M11	3275	I	36	6209	H35	
2133	E22	2440	N19	3276	I	36	6210	N17	
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2151	A11	3105	B	3	3291	E29	6409	O19	
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2156	B	8	3110	A	4	3305	I	8	7001
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2212	D36	3135	D25	3403	H16	7014	O20		
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2214	C36	3137	E24	3405	K13	7014	O22		
2215	F30	3138	E23	3406	K13	7015	L24		
2216	F31	3139	F22	3407	K14	7015	H27		
2217	F32	3140	F22	3408	I	14	7016	L27	
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2219	K33	3142	F25	3410	J	9	7017	K19	
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2236	H30	3155	A10	3428	N15	7201	B29		
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2305	H	4	3214	F32	3457	I	27	7407	M20
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2316	J18	3224	C38	3467	K23				
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2318	M18	3226	C39	3470	N	2			
2321	H20	3231	G29	3471	O19				
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2323	H23	3235	H29	4320	M11				
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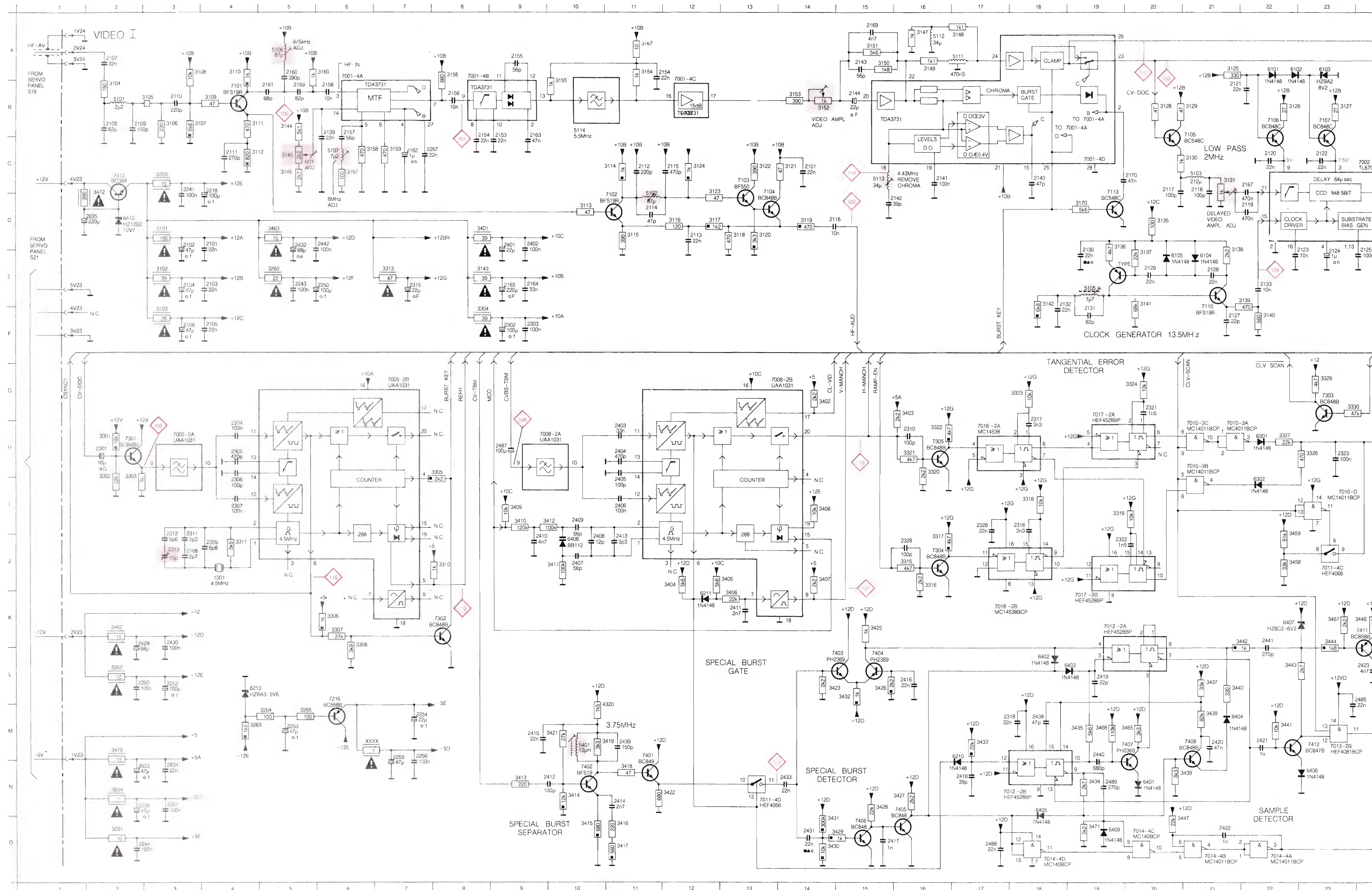
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2114	C	1	2302	D	4	3138	D	3	3285	E	8	5101	C	1	7410	D	7
2115	C	1	2303	D	4	3139	E	3	3286	E	4	5102	C	1	7411	D	8
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2122	E	3	2311	C	4	3147	E	1	3302	D	2	5112	D	1	79	E	6
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2130	E	2	2322	D	7	3156	D	1	3310	C	7	5206	E	7	V23	C	5
2131	D	3	2323	D	7	3158	D	1	3311	D	4	5207	E	7	V24	C	1
2132	D	3	2324	C	6	3158	E	1	3312	C	6	5208	E	8	V25	C	3
2133	E	3	2325	C	7	3159	D	1	3313	C	6	5401	E	2	V26	C	7
2134	F	2	2326	C	6	3160	D	1	3315	C	7	6101	E	2			
2135	E	2	2327	D	7	3162	E	1	3316	C	6	6102	E	2			
2136	E	2	2328	C	6	3163	E	2	3317	C	6	6103	D	2			
2137	E	2	2401	D	6	3164	E	2	3318	C	6	6104	E	3			
2138	E	2	2402	D	5	3165	E	2	3319	C	7	6105	C	3			
2139	E	1	2404	D	5	3166	E	2	3320	C	7	6201	E	5			
2140	E	1	2405	D	5	3201	C	3	3320	D	6	6202	E	5			
2141	E	1	2406	D	6	3202	C	3	3321	C	7	6203	E	6			
2142	E	1	2407	D	5	3203	E	3	3322	C	7	6204	E	6			
2143	E	1	2408	D	5	3204	E	4	3323	D	6	6205	E	6			
2144	D	2	2409	D	5	3205	E	4	3324	D	7	6206	E	7			
2153	D	1	2410	D	5	3206	E	4	3325	C	5	6207	E	7			
2153	E	1	2411	D	5	3207	E	4	3326	D	7	6208	E	7			
2154	E	1	2412	D	6	3208	E	4	3327	D	7	6209	E	6			
2155	E	1	2414	E	6	3209	E	4	3328	C	7	6210	E	5			
2156	E	1	2415	D	6	3210	E	3	3401	D	5	6211	E	5			
2157	D	1	2416	D	8	3211	E	3	3402	C	5	6212	E	4			
2157	D	1	2417	E	9	3212	C	3	3403	C	6	6213	C	5			
2158	D	1	2418	D	8	3213	E	5	3404	E	5	6214	E	5			
2159	D	1	2420	D	8	3214	E	5	3405	D	5	6301	E	7			
2160	D	1	2421	C	8	3215	E	5	3406	D	5	6302	D	7			
2161	D	1	2422	D	8	3216	E	5	3407	C	6	6303	C	5			
2164	E	1	2423	D	7	3217	E	5	3408	D	5	6401	E	9			
2165	C	2	2424	D	7	3218	E	5	3409	D	5	6402	E	9			
2167	E	3	2425	E	8	3219	E	5	3410	D	5	6403	E	9			
2168	E	4	2427	E	7	3220	D	5	3411	D	5	6404	D	9			
2169	E	1	2428	E	7	3221	E	9	3412	D	5	6405	D	9			
2201	E	3	2429	D	6	3222	E	5	3413	D	6	6406	D	8			
2202	E	4	2430	D	6	3223	E	5	3414	D	6	6407	C	8			
2203	E	4	2431	D	9	3224	E	5	3415	E	6	6408	D	5			
2204	E	4	2432	D	6	3225	E	5	3416	E	6	6409	C	9			
2205	E	4	2433	D	8	3226	E	5	3416	E	6	6410	B	4			
2206	E	4	2438	E	8	3231	E	4	3418	E	6	7101	D	1			
2207	E	5	2439	D	6	3234	E	4	3419	D	6	710	D	7			
2208	E	5	2440	E	8	3235	D	4	3421	D	6	7101	C	1			
2209	E	3	2441	D	9	3236	D	4	3422	D	8	7102	C	1			
2210	E	3	2442	D	6	3237	D	3	3423	D	8	7103	C	2			
2211	E	4	2485	D	8	3238	D	4	3424	D	8	7104	C	2			
2212	E	5	2486	E	8	3239	D	4	3425	D	8	7105	D	2			
2213	E	5	2487	E	6	3240	D	4	3426	D	8	7106	E	2			
2214	E	5	2488	C	8	3241	D	4	3427	D	9	7107	E	2			
2215	E	4	2489	D	9	3242	D	4	3428	E	9	7108	E	2			
2216	E	4	2633	D	6	3243	D	4	3429	D	9	7109	E	2			
2217	E	4	2634	D	6	3244	D	4	3430	D	9	711	D	7			
2218	D	5	2635	B	4	3245	D	3	3431	D	9	7110	D	3			
2219	E	5	3101	C	2	3246	C	3	3432	D	8	7111	E	3			
2219	E	8	3102	C	2	3247	D	2	3433	D	8	712	E	8			
2220	D	4	3103	C	3	3248	D	3	3434	D	8	713	D	8			
2222	D	4	3104	C	1	3250	C	3	3435	E	8	714	D	8			
2223	D	4	3105	C	1	3251	C	3	3437	D	8	715	D	7			
2224	D	3	3106	C	1	3253	C	3	3438	D	8	716	E	7			
2225	D	3	3107	C	1	3254	C	3	3439	D	9	717	D	7			
2226	D	2	3108	C	1	3255	C	3	3440	E	9	718	D	6			
2227	C	3	3109	C	1	3256	C	3	3441	C	8	72	E	3			
2228	C	3	3110	C	1	3257	C	3	3442	D	9	7201	E	4			
2229	D	3	3111	C	1	3258	C	3	3443	D	8	7202	E	4			
2230	D	3	3112	C	1	3259	C	4	3444	C	8	7203	E	3			
2231	C	3	3113	C	1	3259	B	4	3445	E	7	7204	E	5			
2232	C	3	3114	C	1	3260	C	4	3446	E	7	7205	E	5			
2233	C	3	3115	C	1	3261	C	3	3446	C	8	7206	E	5			
2234	C	3	3116	C	2	3262	C	5	3447	D	9	7207	E	8			
2235	D	4	3117	C	2	3263	C	5	3448	E	7	7208	E	8			
2236	D	3	3118	C	2	3264	C	5	3449	E	7	7209	E	8			
2237	D	3	3119	C	2	3265	C	5	3450	E	8	7210	D	4			
2238	E	6	3120	C	2	3266	E	6	3451	D	7	721					



## MAPPING FOR CIRCUIT DIAGRAM VIDEO I-5

1001	J 4	2311	I 3	3220	B37	3461	I 24	7411	K24
1003	M34	2312	I 3	3221	C37	3462	K 2	7412	M23
2101	D 4	2312	J 3	3222	B37	3463	D 5	7413	C 2
2101	C14	2315	E 7	3223	B37	3465	M20	XXXX	M 6
2102	D 3	2316	I 18	3224	B38	3466	H26		
2103	E 4	2317	G18	3225	C38	3467	K23		
2104	E 3	2318	M18	3226	B38	3468	M19		
2105	F 4	2321	G20	3231	G29	3470	M 2		
2106	F 3	2322	J 19	3234	I 29	3471	O19		
2107	A 2	2323	H23	3235	H29	3472	C 2		
2108	B 2	2325	J25	3236	G28	3474	I 24		
2109	B 3	2326	I 17	3237	H29	3475	I 24		
2110	B 3	2328	J16	3238	G31	4320	M11		
2111	C 4	2401	D 9	3239	H31	5101	B 2		
2112	C11	2402	D 9	3240	G32	5102	C11		
2113	D12	2403	H11	3241	H32	5103	C21		
2114	D11	2404	H11	3242	G31	5104	C25		
2115	C12	2405	I 11	3243	I 31	5105	E19		
2116	D14	2406	I 11	3244	J31	5106	A 5		
2117	C20	2407	J10	3245	I 30	5107	C 6		
2118	C21	2408	J10	3246	I 30	5111	A17		
2119	D22	2409	I 10	3247	J30	5112	A16		
2120	C22	2410	J 9	3250	L28	5113	C15		
2121	B21	2411	K13	3251	L29	5114	B10		
2122	C23	2412	N10	3253	K31	5201	C29		
2123	D23	2413	J11	3254	K32	5202	F34		
2124	E23	2414	N11	3255	L32	5203	F34		
2125	D24	2415	M 9	3256	L31	5204	F35		
2126	E24	2416	L16	3257	L31	5205	F35		
2127	F21	2417	O16	3258	M31	5206	F36		
2128	E21	2418	N17	3259	C 3	5207	F36		
2129	E20	2419	L19	3260	E 3	5208	F37		
2130	D19	2420	M21	3261	O 2	5209	L34		
2131	F19	2421	M22	3262	L 2	5401	M10		
2132	E19	2422	O21	3263	M 4	6101	A22		
2133	E22	2423	L24	3264	M 5	6102	A22		
2134	C24	2424	L26	3265	M 5	6103	A23		
2135	C25	2425	M27	3266	J34	6104	E21		
2136	C25	2427	G26	3267	J34	6105	E20		
2137	C26	2429	K 3	3268	I 34	6201	B30		
2138	D27	2430	K 3	3269	I 33	6202	B30		
2139	B 6	2431	O14	3270	J34	6203	F34		
2140	C18	2432	D 5	3271	J35	6204	F35		
2141	C16	2433	N14	3272	J34	6205	F35		
2142	D16	2438	M18	3273	H35	6206	F36		
2143	A15	2439	M11	3274	.35	6207	F36		
2144	B15	2440	M19	3275	I 35	6208	F37		
2153	B 9	2441	K22	3276	H36	6209	H35		
2154	A12	2442	D 6	3277	H36	6210	M17		
2154	B 8	2443	I 25	3278	G37	6211	K12		
2155	A 9	2485	L24	3279	G38	6212	F29		
2156	B 8	2486	I 26	3280	G38	6213	L 4		
2157	B 6	2487	H 9	3281	F39	6214	F32		
2158	B 6	2488	O17	3283	F38	6301	H22		
2158	B 5	2489	N19	3284	F37	7302	I 22		
2160	A 5	2633	N 3	3285	E38	6401	N20		
2161	B 5	2634	N 3	3286	F31	6402	.18		
2162	C 7	2635	D 2	3287	E31	6403	.19		
2163	B 9	3101	D 3	3288	F30	6404	M21		
2164	E 9	3102	E 3	3289	E30	6405	N18		
2165	E 9	3103	F 3	3291	E29	6406	N23		
2167	C22	3104	B 2	3292	M35	6407	K22		
2168	J 3	3105	B 3	3293	M36	6408	J10		
2169	A15	3106	B 3	3294	N 2	6409	O19		
2170	C20	3107	B 4	3296	C36	6410	D 2		
2201	A28	3108	A 4	3301	H 2	7001	A 6		
2202	C29	3109	B 4	3302	I 2	7001	C19		
2203	D29	3110	A 4	3303	H 2	7001	A 8		
2204	C30	3111	B 5	3304	F 8	7001	A12		
2205	C31	3112	C 5	3305	H 8	7002	C24		
2206	D31	3113	D10	3306	K 6	7003	K30		
2207	B31	3114	C11	3307	K 6	7004	I 31		
2208	B32	3115	D11	3308	K 6	7005	K 3		
2209	B32	3116	D12	3310	J 8	7005	G 7		
2210	B33	3117	D12	3311	J 4	7006	G29		
2211	B34	3118	D13	3313	E 7	7007	C31		
2212	D36	3119	D14	3315	J16	7008	H10		
2213	C36	3120	D13	3316	J16	7008	G14		
2214	C36	3121	C14	3317	J16	7009	H34		
2215	F30	3122	C13	3318	I 18	7009	I 36		
2216	F31	3123	C12	3319	I 19	7010	H21		
2217	F31	3124	C12	3320	H16	7010	H21		
2218	C 4	3125	A21	3321	H16	7010	H21		
2219	J33	3126	B22	3322	H16	7010	I 23		
2220	G29	3127	B23	3323	G18	7011	N13		
2222	H32	3128	B20	3324	G20	7011	L25		
2223	J31	3129	B21	3326	H23	7011	K26		
2224	J30	3130	C21	3327	H22	7011	.23		
2225	J29	3131	C21	3328	K25	7012	N18		
2226	K29	3132	D25	3329	G23	7012	K19		
2227	L28	3133	D25	3330	G23	7013	K23		
2228	L28	3134	D25	3401	D 8	7013	M24		
2229	M29	3135	D20	3402	G14	7014	O18		
2230	M30	3136	D19	3403	G16	7014	O20		
2231	L30	3137	E20	3404	J12	7014	O21		
2232	L31	3138	D21	3405	J13	7014	O22		
2233	K32	3139	E22	3406	K13	7015	K34		
2234	M32	3140	F22	3407	J14	7015	H27		
2235	G30	3141	E20	3408	I 14	7016	K27		
2236	H30	3142	E18	3409	I 9	7016	H24		
2237	I 30	3143	E 8	3410	I 9	7017	K19		
2238	H35	3144	B 5	3411	J10	7017	G19		
2239	I 35	3145	C 5	3412	I 10	7018	K17		
2240	H33	3146	C 5	3413	N 9	7018	H17		
2241	C 3	3147	A16	3414	N10	7101	B 4		
2242	G35	3148	A17	3415	O10	7102	D11		
2243	E 5	3149	A16	3416	O11	7103	C13		
2244	O 3	3150	A15	3417	O11	7104	C13		
2244	I 24	3151	A15	3418	N11	7105	B21		
2245	F36	3152	B14	3419	M11	7106	B22		
2246	F36	3153	B14	3421	M10	7107	B23		
2247	G38	3154	A11	3422	N12	7108	C25		
2248	J34	3155	A10	3423	.15	7109	C26		
2249	G36	3156	A 8	3425	K15	7110	E21		
2250	E 6	3157	C 6	3426	L15	7113	C19		
2252	L 3	3158	C 7	3427	N16	7201	A29		
2253	M 5	3159	C 7	3428	N15	7202	A30		
2254	M 7	3160	A 6	3429	O15	7203	C35		
2255	M 7	3162	B26	3430	O14	7204	B37		
2256	M 7	3163	C25	3431	O14	7205	B38		
2257	N 3	3164	C26	3432	L15	7206	F33		
2258	N 3	3165	C27	3433	M17	7207	F37		
2260	L 3	3166	D26	3434	N19	7208	F38		
2261	H28	3167	A11	3435	M19	7209	F39		
2262	H30	3168	D27	3437	L21	7210	G31		
2266	E39	3170	D19	3438	M21	7211	K29		
2267	C 8	3201	A28	3439	N21	7212	C27		
2268	N35	3202	B29	3440	.21	7213	G30		
2269	M36	3203	A29	3441	M22	7214	K31		
2269	L34	3204	B29	3442	K22	7215	K32		
2270	N34	3205	D30	3443	.22	7216	L 6		
2271	N35	3206	D30	3444	K23	7301	H 2		
2272	L34	3207	A30	3446	K24	7302	K 8		
2273	L35	3208	B30	3447	O21	7303	G23		
2275	M33	3209	B31	3448	.27	7304	J16		
2276	E38	3210	B33	3449	.27	7305	H16		
2301	H 2	3211	C36	3450	G26	7401	M11		
2302	F 9	3212	C35	3451	G27	7402	N10		
2303	F 9	3213	D36	3453	H26	7403	L15		
2304	H 4	3214	E32	3455	.26	7404	L15		
2305	H 4	3215	F32	3456	.26	7405	N16		
2306	I 4	3216	F33	3457	I 27	7406	O15		
2307	I 4	3217	F33	3458	J22	7407	M20		
2309	J 4	3218	C37	3459	I 22	7408	M21		
2310	H16	3219	C37	3460	H25	7410	J 24		















## MEASUREMENTS &amp; ADJUSTMENTS VIDEO &amp; MTF

STEP	SIGNAL	MODE					REMARKS
1	HF IN	STOP	100	5106		MIN. AMPLITUDE	DISCONNECTED V24 INJECT 875 kHz $\approx 80$ mVpp IN V24
2	MTF 8MHz ADJ.	STOP	101	5107		MAX. AMPLITUDE	DISCONNECTED V24 INJECT 8 kHz $\approx 40$ mVpp IN V24
3	AUDIO 2.8MHz SUPPRESSION	STOP	102	5102		MIN. AMPLITUDE	DISCONNECTED V24 INJECT 2.8 kHz $\approx 40$ mVpp
4	MTF GAIN	VIDEO TEST DISC PICT.NR. 515 STILL PICTURE	103	3145		SEE DRAWING MDA.01556	ADJUST FOR MULTI BURST MULTI BURST

## MEASUREMENTS &amp; ADJUSTMENTS DROP-OUT CIRCUIT

STEP	SIGNAL	MODE					REMARKS
1	FREQUENCY	STOP	109	5105	FREQUENCY COUNTER 13.3MHz		COARSE
2	DELAY-TIME	VIDEO TEST DISC. PICT.NBR. 10800	A-103 B-111	5105		A CHANNEL B CHANNEL	FINE ADJUST DELAY TIME BETWEEN EA AND B FOR $64\mu$ s
3	AMPLITUDE DELAYED VIDEO	VIDEO TEST DISC. PICT.NR. 10800	A-103 B-111	3131		A CHANNEL B CHANNEL	ADJUSTMENT THE AMPLITUDE TO BE EQUAL FOR A AND B

## MEASUREMENTS &amp; ADJUSTMENTS VIDEO

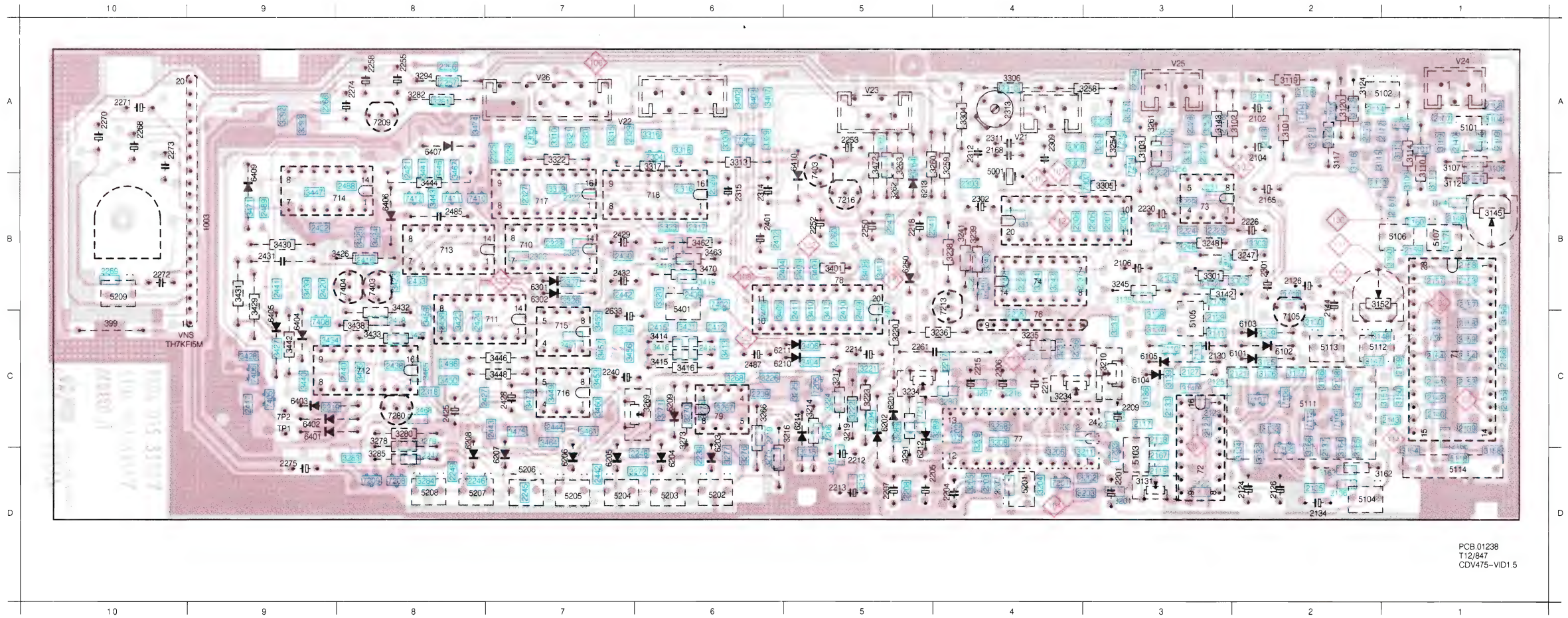
STEP	SIGNAL	MODE					REMARKS
1	DC-LEVEL	VIDEO TEST DISC COLOURBAR STILL PICTURE	104	3210		2.2V	
2	VIDEO AMPLITUDE	VIDEO TEST DISC COLOURBAR STILL PICTURE	103	3152			
3	VIDEO AMPLITUDE	VIDEO TEST DISC COLOURBAR STILL PICTURE	106	3296			
4	DROP OUT	VIDEO TEST DISC COLOURBAR STILL PICTURE	103	3131			
5	VIDEO AMPLITUDE	VIDEO TEST DISC COLOURBAR STILL PICTURE	107			U=1.85Vpp-2Vpp	
6	VIDEO AMPLITUDE	VIDEO TEST DISC COLOURBAR STILL PICTURE	108			U=2.7Vpp-3Vpp	

## MEASUREMENTS &amp; ADJUSTMENTS TIME-BASE CONTROL

STEP	SIGNAL	MODE					REMARKS
1	FREQUENCY	STOP	112	2313	FREQUENCY COUNTER		AFTER 2 MINUTES WARMING UP 15.625.024- 15.624.975Hz
2	VCO	STOP 9-7006 GROUNDED TO EARTH	103 104	3234		A- CHANNEL B- CHANNEL	DELAY TIME BETWEEN A AND B $\pm 70\mu$ s
3	SPECIAL BURST SUPPRESSION	VIDEO TEST DISC PICT.NBR. 750	114 116	5113		TRIGGER SIGNAL 116	MIN. AMPLITUDE OF THE SPECIAL BURST
4	SPECIAL BURST AMPLITUDE	VIDEO TEST DISC. PLAY	117	5401			MAX. AMPLITUDE OF SPECIAL BURST
5	BURST ERROR	VIDEO TEST DISC PICT.NBR. 170 STILL PICTURE		2369			MIN. STRIPES IN RED PICTURE ON TV SCREEN
	BURSTKEY	PLAY	118			8.5V $\pm 1$ V	
	C. SYNC	PLAY	116			5V $\pm 1$ V	
	H MANCH.	PLAY	119			5V+250mV -500mV	15625Hz $\pm 1$ kHz
	V. MANCH.	PLAY	121			5V+250mV -500mV	50Hz $\pm 5$ Hz
	MCO	PLAY	122			10V $\pm 5$ V	DUTY CYCLE $32\mu$ s $\pm 8\mu$ s








2103	B10	2123	C	3	2153	C	1	2208	D	5	2231	B	3	2257	A	8	2313	A	4	2414	C	6	2443	C	7	3115	A	2	3138	C	3	3163	D	2	3220	C	5	3250	A	3	3274	C	6	3302	B	2	3326	B	7	3419	B	6	3444	B	8	3471	B	9	5205	D	7	6213	B	5	7108	D	2	7210	B	4	7411	B	8	
2101	A	2	2124	D	2	2154	C	1	2209	C	3	2232	A	3	2258	A	8	2314	B	6	2415	C	6	2444	C	7	3116	A	2	3139	C	3	3164	D	2	3221	C	5	3251	A	3	3275	D	6	3303	B	2	3327	B	7	3421	C	6	3446	C	7	3472	A	5	5206	D	7	6214	C	5	7109	C	2	7211	C	5	7412	B	8
2102	A	2	2125	C	2	2155	C	1	2210	C	3	2233	A	3	2260	B	5	2315	B	6	2416	B	8	2485	B	8	3117	A	2	3140	C	3	3165	D	2	3222	C	5	3253	A	3	3276	D	6	3304	A	4	3328	A	7	3422	C	8	3446	A	8	3473	C	7	5207	D	8	6250	B	5	7111	C	7	7213	B	4	75	B	4
2103	A	2	2126	B	2	2156	C	1	2211	C	4	2234	A	3	2261	C	5	2316	B	6	2417	C	9	2486	C	8	3118	A	2	3141	C	3	3166	D	2	3223	C	5	3254	A	3	3277	D	6	3305	B	3	3329	A	6	3423	B	8	3447	B	9	3474	A	8	5208	D	8	6301	B	7	7110	C	3	7214	A	3	76	C	4
2104	A	2	2126	D	2	2157	B	1	2212	D	5	2235	C	4	2266	A	9	2317	B	6	2418	C	8	2487	C	6	3119	A	2	3142	B	3	3166	D	2	3224	C	5	3255	A	3	3278	C	8	3306	A	4	3330	A	6	3424	B	8	3448	C	7	3475	C	7	5209	B	10	6302	B	7	7111	C	3	7215	A	3	77	C	4
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2108	A	1	2130	C	3	2160	B	1	2216	C	4	2239	C	6	2271	A	10	2323	B	7	2424	C	8	2634	C	7	3123	A	2	3147	C	2	3204	D	4	3234	C	4	3259	A	4	3282	A	8	3310	A	4	3404	C	5	3428	C	9	3453	C	7	5102	A	2	6103	C	2	6404	C	9	714	B	9	7301	B	3	7P2	C	9
2109	A	1	2132	B	3	2161	B	1	2217	C	4	2240	C	7	2272	B	10	2325	A	7	2425	C	8	3101	A	2	3124	A	2	3148	B	1	3205	D	4	3235	C	4	3260	A	5	3283	D	8	3310	A	7	3405	B	6	3429	B	9	3455	C	7	5103	D	3	6104	C	3	6405	B	9	715	C	7	7302	B	3	V21	A	3
2110	A	1	2133	C	3	2164	C	1	2218	B	5	2241	B	5	2273	A	10	2326	B	6	2427	C	8	3102	A	2	3125	C	2	3149	C	2	3206	D	4	3236	C	4	3261	A	5	3284	D	8	3311	B	4	3406	C	5	3430	B	9	3456	C	7	5104	D	2	6105	C	3	6406	B	8	716	C	7	7303	A	6	V22	A	6
2111	B	1	2134	D	2	2165	B	2	2219	C	6	2243	B	5	2274	A	8	2327	B	7	2428	C	7	3103	A	3	3126	C	2	3149	C	2	3208	D	4	3237	C	3	3262	B	5	3285	D	8	3313	A	6	3407	A	6	3431	B	9	3457	C	7	5105	C	3	6201	C	5	6407	A	8	717	B	7	7304	A	6	V23	A	5
2112	A	1	2135	D	2	2166	C	1	2219	C	9	2244	B	3	2275	D	9	2329	A	7	2429	B	7	3104	A	1	3127	B	1	3150	C	1	3209	C	4	3238	B	4	3263	B	5	3286	C	4	3315	A	7	3408	B	5	3432	B	8	3458	C	9	5106	B	1	6202	C	5	6409	A	9	718	B	6	7305	A	7	V24	A	1
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2114	A	2	2137	C	2	2168	A	4	2222	B	4	2246	D	8	2302	B	4	2402	B	6	2431	B	9	3106	A	1	3128	B	2	3152	B	2	3211	D	4	3240	B	4	3265	A	5	3288	C	4	3317	A	6	3410	B	5	3434	C	9	3460	C	7	5111	C	2	6204	D	6	71	C	1	7201	D	4	7401	B	6	V26	A	7
2115	A	2	2138	C	2	2169	C	1	2223	B	4	2247	D	8	2303	B	4	2404	B	6	2432	B	7	3107	A	1	3129	C	2	3153	C	1	3212	C	4	3241	B	4	3266	C	6	3289	C	5	3318	A	6	3411	B	5	3435	C	8	3461	C	7	5112	C	2	6205	D	7	710	B	7	7202	C	4	7402	B	6			
2116	A	3	2139	C	1	2201	D	3	2224	B	3	2248	D	6	2304	B	3	2405	B	5	2433	B	8	3108	A	1	3131	D	3	3154	D	1	3213	D	5	3242	B	4	3267	C	6	3289	C	4	3319	B	7	3412	B	5	3437	C	8	3462	B	6	5113	C	2	6206	D	7	7101	A	1	7203	D	3	7403	B	8			
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2121	C	2	2144	B	2	2206	C	4	2229	B	3	2255	A	8	2311	A	4	2411	B	5	2442	D	7	3113	A	1	3136	C	3	3160	B	1	3218	D	5	3247	B	2	3272	D	7	3296	C	5	3323	B	6	3416	C	6	3442	C	9	3468	C	8	5203	D	6	6211	C	6	7106	C	2	7209	D	8	7408	C	9			
2122	C	3	2153	B	1	2207	D	5	2230	C	4	2256	A	8	2312	A	4	2412	C	6	2442	D	7	3114	A	1	3137	C	3	3162	D	2	3219	C	5	3248	B	3	3273	C	6	3301	B	3	3324	B	7	3418	B	6	3443	B	8	3470	B	9	5204	D	7	6212	C	4	7107	C	2	7209	A	8	7410	B	8			



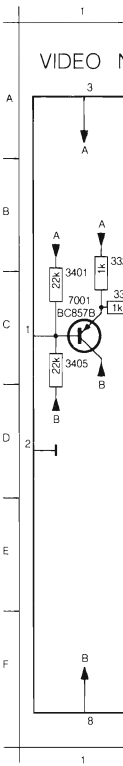


PARTSLIST VIDEO I-5

Various						
1001	4822 242 70361	X-TAL 4.5 MHZ		4822 130 30621	1N4148	
1003	4822 214 51769	V.N.S THICK FILM		4822 130 32227	BB112	
	4822 124 41558	ELCAP 10μ BIP 25V		6103	4822 130 33294	HZ9A2 8V2
	4822 122 33325	CHIP 470N 16V		6201	5322 130 34865	BZV46 1V5
	4822 122 10166	TUBULAR 22N 16V		6202	4822 130 33294	HZ9A2 8V2
	4822 122 33142	POLYESTER 6P8		6209	4822 130 32566	HZ11A3 10V0
	4822 122 33141	POLYESTER 3P3		6212	4822 130 32697	HZ6A3 5V6
	4822 122 32148	POLYESTER 5P6		6213	4822 130 32697	HZ6A3 5V6
	4822 125 50062	TRIMMING CAPACITOR 10PF		6407	4822 130 32698	HZ6C2 6V2
	5322 122 32933	1NF 5%NP0 50V		6410	5322 130 32026	HZ12B2
	4822 122 32891	POLYESTER 68 N 50V				
			7001	4822 209 72757	IC TDA3731/N1	
	4822 116 52415	RESISTOR 3K	7002	4822 209 11412	TL8704P	
	4822 111 30517	SAFETY RESISTOR 22E	7003	4822 209 71275	CXL5001	
	4822 111 30508	SAFETY RESISTOR 10E	7004	5322 209 82575	PC74HC74P	
	4822 111 30526	SAFETY RESISTOR 47E	7005	4822 209 71316	UAA1031	
	4822 111 30513	SAFETY RESISTOR 15E	7006	4822 209 71825	PA0017	
	4822 111 30524	SAFETY RESISTOR 39E	7007	4822 209 71276	CXL1004	
3131	4822 100 11214	TRIMMING POTENTIOMETER 1K	7008	4822 209 71316	UAA1031	
3145	5322 101 14008	TRIMMING POTENTIOMETER 2K2	7009	4822 209 81349	MC1458P1 (MTLA)	
3152	4822 100 10254	TRIMMING POTENTIOMETER 1K	7010	4822 209 10247	MC14011BCP	
3210	4822 100 11214	TRIMMING POTENTIOMETER 1K	7011	5322 209 10357	HEF4066BP	
3234	4822 101 10859	TRIMMING POTENTIOMETER 10K	7012	4822 209 10866	HEF4428BP	
3269	4822 100 11214	TRIMMING POTENTIOMETER 1K	7013	4822 209 10053	MC14081BCP	
			7014	4822 209 10247	MC14011BCP	
			7015	4822 209 71382	MC34002BP	
			7016	4822 209 71382	MC34002BP	
			7017	4822 209 10866	HEF4428BP	
			7018	4822 209 81091	MC14538BCP	
						
5101	4822 157 53266	COIL 3μH	4822 130 42353	BFS19		
5102	4822 156 10994	COIL 87μH	4822 130 42131	BF550		
5103	4822 156 11007	COIL 212μH	5322 130 41982	BC848B		
5104	4822 156 11007	COIL 212μH	4822 130 44196	BC548C		
5105	4822 156 10997	COIL 1.7μH	4822 130 60516	BC859C		
5106	4822 156 21054	COIL 87UH	4822 130 42513	BC858C		
5107	4822 156 21147	COIL 7.2μH	5322 130 44336	BSV52		
5112	4822 156 21026	COIL 34 μH	5322 130 41983	BC858B		
5113	4822 156 21026	COIL 34 μH	4822 130 40938	BC548		
5201	4822 156 11002	COIL 7.7μH	4822 130 42711	BC849B		
5202	4822 156 10998	COIL 3 μH	4822 130 41594	PH2369		
5203	4822 156 11001	COIL 6 μH	4822 130 60511	BC847B		
5204	4822 156 11001	COIL 6 μH	5322 130 44647	BC368		
5205	4822 156 11001	COIL 6 μH				
5206	4822 156 11001	COIL 6 μH				
5207	4822 156 11001	COIL 6 μH				
5208	4822 156 10998	COIL 3 μH				
5401	4822 156 11003	COIL 12μH				
5111	4822 320 40081	470 NSEC				
5114	4822 157 53267	LOW-PASSFILTER 5.5MHZ				

VIDEO N

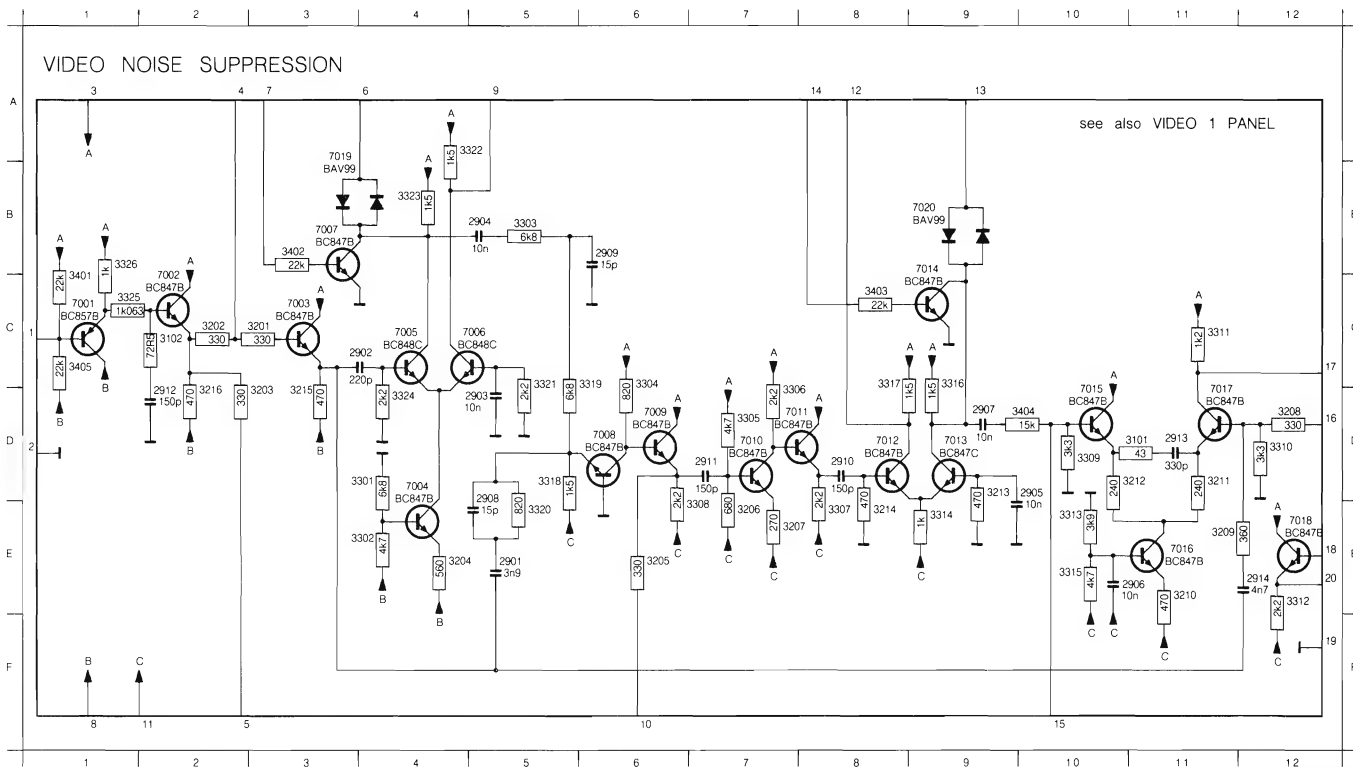
2901 E 5 290  
2902 C 4 290  
2903 D 5 290  
2904 B 5 291  
2905 D10 291  
2906 E11 291





## VIDEO NOISE SUPPRESSION THICK FILM

2901	E 5	2907	D 9	2913	D11	3203	D 3	3209	E11	3215	D 3	3305	D 7	3311	C11	3317	C 8	3323	B 4	3403	C 8	7004	D 4	7010	D 7	7016	E11
2902	C 4	2908	D 5	2914	E12	3204	E 4	3210	E11	3216	D 2	3306	D 8	3312	E12	3318	D 5	3324	D 4	3404	D10	7005	C 4	7011	D 8	7017	D11
2903	D 4	2909	D 6	3101	D11	3205	E 6	3211	D11	3301	D 4	3307	E 8	3313	E10	3319	C 6	3325	C 1	3405	C 1	7006	C 5	7012	D 8	7018	E12
2904	B 5	2910	D 6	3102	C 2	3206	E 7	3212	D11	3302	E 4	3308	E 7	3314	F 9	3320	E 5	3326	B 1	7001	C 1	7007	B 3	7013	D 9	7019	A 3
2905	D10	2911	D 7	3201	C 3	3207	E 8	3213	D 9	3303	B 5	3309	D10	3315	E10	3321	C 5	3401	C 1	7002	C 2	7008	D 6	7014	B 9	7020	B 9
2906	E11	2912	D 2	3202	C 2	3208	D12	3214	E 8	3304	C 6	3310	D12	3316	C 9	3322	A 5	3402	B 3	7003	C 3	7009	D 6	7015	D10		



prs 05362  
121-838



## MEASUREMENTS AND ADJUSTMENTS SYNC. GENERATOR



STEP	SIGNAL	MODE					REMARKS
1	FREQUENCY	STOP	150	5101	FREQ. COUNTER		5MHz $\pm$ 10kHz COARSE
2	DC-LEVEL	STOP	151	5101		3.5V $\pm$ 50mV	FINE

## MEASUREMENTS AND ADJUSTMENTS LUM/CHROM./R.G.B.

STEP	SIGNAL	MODE					REMARKS
1	LUMINANCE	VIDEO TEST DISC COLOURBAR STILL PICTURE	152	5203			ADJUST FOR A MINIMUM COLOUR SIGNAL
2	LUMINANCE	VIDEO TEST DISC PICT NO 10427	152 153	5204			
3	CHROMINANCE	VIDEO TEST DISC COLOURBAR STILL PICTURE	154	5202			ADJUST FOR MAXIMUM CHROMINANCE
4	R G B	VIDEO TEST DISC WHITE PICTURE STILL PICTURE	156	3265			
5	VENETIAN BLINDS	VIDEO TEST DISC COLOURBAR STILL PICTURE	TV SCREEN	3237			ADJUST FOR MINIMUM "BLINDS" IN THE MAGENTA COLOUR
6	R G B	VIDEO TEST DISC COLOURBAR STILL PICTURE	156	5205 OR 5206			ADJUST FOR MINIMAL JITTER
7	SUB CARRIER	VIDEO TEST DISC COLOURBAR	157	2221	FREQ. COUNTER 8.86MHz		
8	R G B	VIDEO TEST DISC COLOURBAR	156 158 159				
9	C V B S	VIDEO TEST DISC COLOURBAR	161				
10	SUB CARRIER CVBS MOD	VIDEO TEST DISC COLOURBAR	162	2250	FREQ. COUNTER 4.433619MHz $\pm$ 30Hz		
11	AUDIO L+R	VIDEO TEST DISC PICT NO 4615-5399 A-B REP	163 164	3006 3026	R M S CINCH 625mV SCART 310mV		PM6309 DISTORTION METER
12	AUDIO DISTORTION	VIDEO TEST DISC PICT NO 4615-5399 A-B REP	163 164	5001 5002	$\geq$ 0.6%		PM6309 DISTORTION METER








## PARTSLIST VIDEO I-4

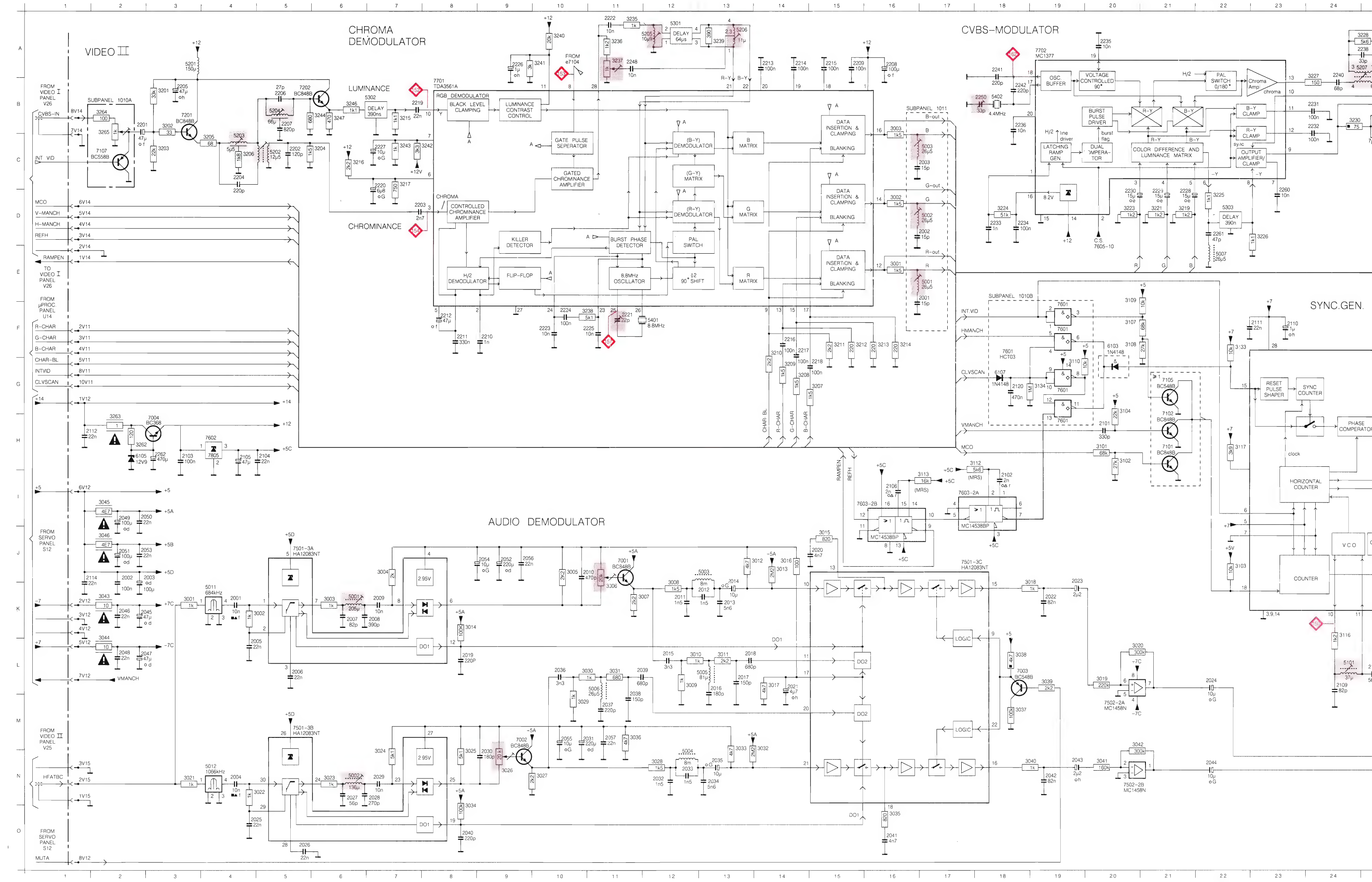
 4822 122 10177 10NF 20% 25V 4822 121 51053 2NF 1% 250V 4822 122 10166 TUBULAR 22N 16V 4822 122 33156 100NF 63V 2221 4822 125 50045 TRIMMING CAPACITOR 1.8-22PF 250V 4822 125 50207 TRIMMING CAPACITOR 2-33PF 250V	 5322 130 31684 BB809 4822 130 30621 1N4148 5322 130 41982 BC848B 4822 130 44197 BC558B 4822 130 60887 BF 840 4822 130 40937 BC548B 5322 130 41983 BC858B
 3006 4822 100 11215 TRIMMING POTENTIOMETER 20K 3026 4822 100 11215 TRIMMING POTENTIOMETER 20K 3237 4822 100 11214 TRIMMING POTENTIOMETER 1K 4822 111 30508 10E 5% 0.33W 4822 111 30508 10E 5% 0.33W 4822 111 30499 4E7 5% 0.33W 4822 116 53027 5K6 1% 0.6W 4822 111 30483 SAFETY RESISTOR 1E PM5	 7501 4822 209 72422 HA12083NT 7601 5322 209 11316 IC PC74HCT03P 7602 4822 209 72042 MC78L05ACP 7603 4822 209 81091 MC 14538BCP 7604 5322 209 81468 SAA1043P 7605 4822 209 72424 MC14049UBCP 7701 4822 209 71518 TDA3561 7702 4822 209 72419 MC1377
 5001 4822 156 11004 COIL 26.5 $\mu$ H 5001 4822 157 53135 C3TV-FN 205.0 $\mu$ H 5002 4822 157 53136 C3TV-FN 136.0 $\mu$ H 5002 4822 156 11004 COIL 26.5 $\mu$ H 5003 4822 157 53516 COIL 8.2 $\mu$ H 5003 4822 156 11004 COIL 26.5 $\mu$ H 5004 4822 157 53516 COIL 8.2 $\mu$ H 5005 4822 157 53137 COIL 81.0 $\mu$ H 5006 4822 156 11004 COIL 26.5 $\mu$ H 5007 4822 156 11004 COIL 26.5 $\mu$ H 5011 4822 242 71658 BAND PASS FILTER 684 KHZ 5012 4822 242 71659 BAND PASS FILTER 1066 KHZ 5101 4822 157 53257 COIL 37.0 $\mu$ H 5201 4822 157 51247 COIL 150 $\mu$ H 5202 4822 157 52874 COIL 12.5 $\mu$ H L2 5203 4822 157 52873 COIL 5.5 $\mu$ H L1 5204 4822 157 52875 COIL 66 $\mu$ H L3 5205 4822 157 53131 COIL 10.9 $\mu$ H 5206 4822 157 53258 COIL 11.0 $\mu$ H 5207 4822 157 53259 COIL 166 NNF 10264 5208 4822 157 53217 COIL 7.04 $\mu$ H 5209 4822 158 10604 COIL 6.8 $\mu$ H 5210 4822 157 50963 COIL 2.2 $\mu$ H 5301 4822 320 40051 DELAY LINE 771 5302 4822 320 40131 DELAY LINE 390 5303 4822 320 40131 DELAY LINE 270 5401 4822 242 70626 8.867238 MHZ 5402 4822 242 72045 4.433619 MHZ	



## Video 2 Version 4/05

 4822 122 10177 10NF 20% 25V 4822 121 51053 2NF 1% 250V 4822 122 10166 22N 16V 4822 122 33156 100NF 63V 4822 125 50207 TRIMMING CAPACITOR 2-33PF 250V  4822 125 50045 TRIMMING CAPACITOR 1.8-22PF 250V	 5322 130 31684 BB809 4822 130 30621 1N4148
 4822 111 30508 10E 5% 0.33W 4822 111 30499 4E7 5% 0.33W 4822 116 53027 5K6 1% 0.6W 4822 111 30483 1E 3006 4822 100 11215 TRIMMING POTENTIOMETER 20K  3026 4822 100 11215 TRIMMING POTENTIOMETER 20K  3237 4822 100 11214 TRIMMING POTENTIOMETER 1K	 5322 130 41982 BC848B 4822 130 44197 BC558B 5322 130 41982 BC848B 4822 130 60887 BF840 4822 130 40937 BC548B 7601 4822 209 72422 HA12083NT 7602 4822 209 72042 MC78L05ACP 7603 4822 209 81091 MC 14538BCP 7604 5322 209 81468 SAA1043P 7605 4822 209 72424 MC14049BCP 7701 4822 209 71518 TDA3561 7702 4822 209 72419 MC1377
 4822 156 11004 COIL 26.5 $\mu$ H 4822 157 53516 COIL 8.2 $\mu$ H 4822 157 53137 COIL 81.0 $\mu$ H 4822 157 53135 COIL 205.0 $\mu$ H 4822 157 53136 COIL 136.0 $\mu$ H 4822 242 71658 BAND PASS 684 KHZ 4822 242 71659 BAND PASS 1066 KHZ 4822 157 53257 COIL 37.0 $\mu$ H 4822 157 51247 COIL 150 $\mu$ H 4822 157 52874 COIL 12.5 $\mu$ H L2 4822 157 52873 COIL 5.5 $\mu$ H L1 4822 157 52875 COIL 66 $\mu$ H L3 4822 157 53131 COIL 10.9 $\mu$ H 4822 157 53258 COIL 11.0 $\mu$ H 4822 157 53259 COIL 166 NNF 10264 4822 157 53217 COIL 7.04 $\mu$ H 4822 158 10604 COIL 0.8 $\mu$ H 4822 157 50963 COIL 6.8 $\mu$ H 5301 4822 320 40051 DELAY LINE 711 5302 4822 320 40131 DELAY LINE 390 5303 4822 320 40131 DELAY LINE 270 5401 4822 242 70626 X-TAL 8.867238 MHZ 5402 4822 242 72045 X-TAL 4.433619 MHZ	



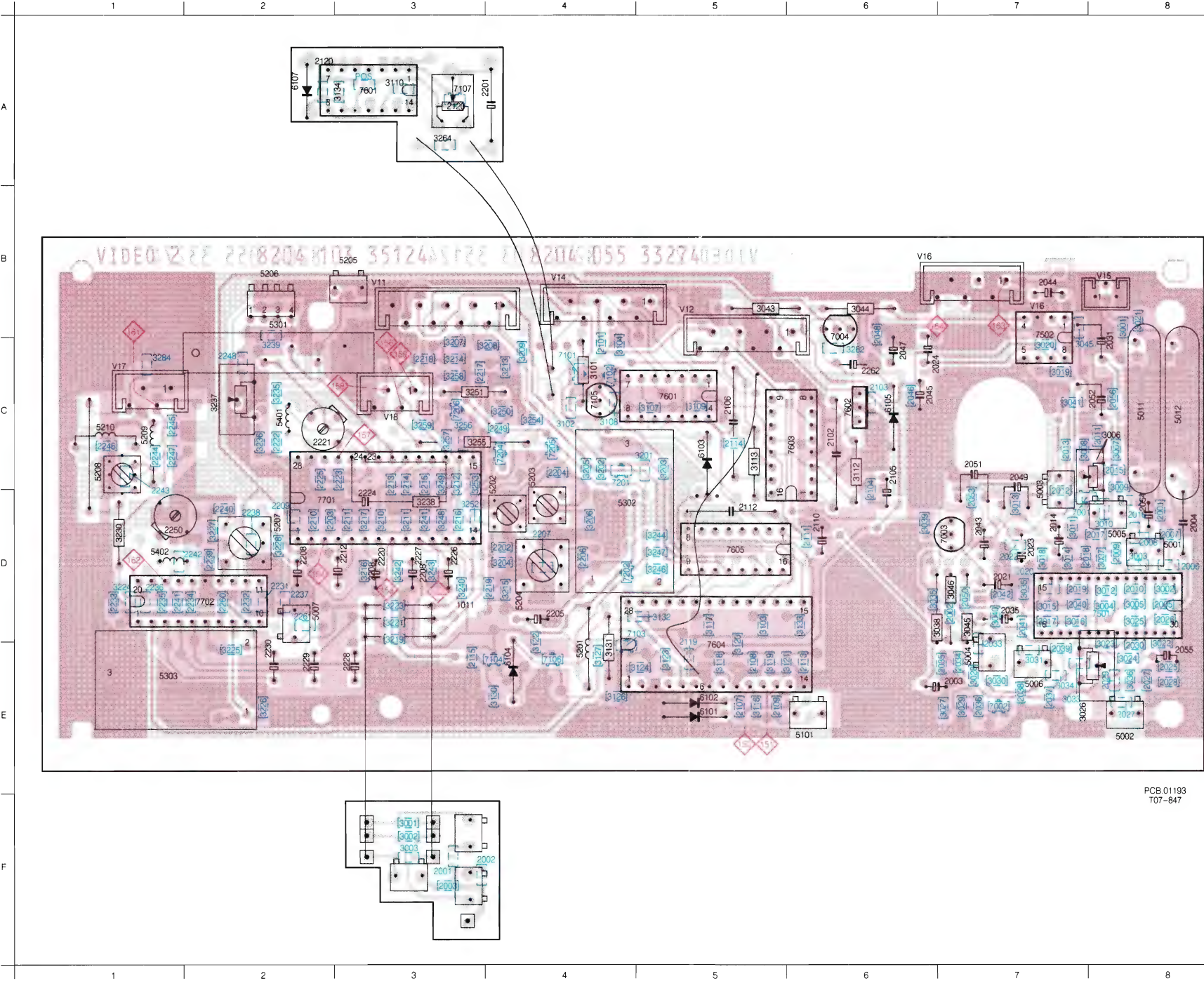






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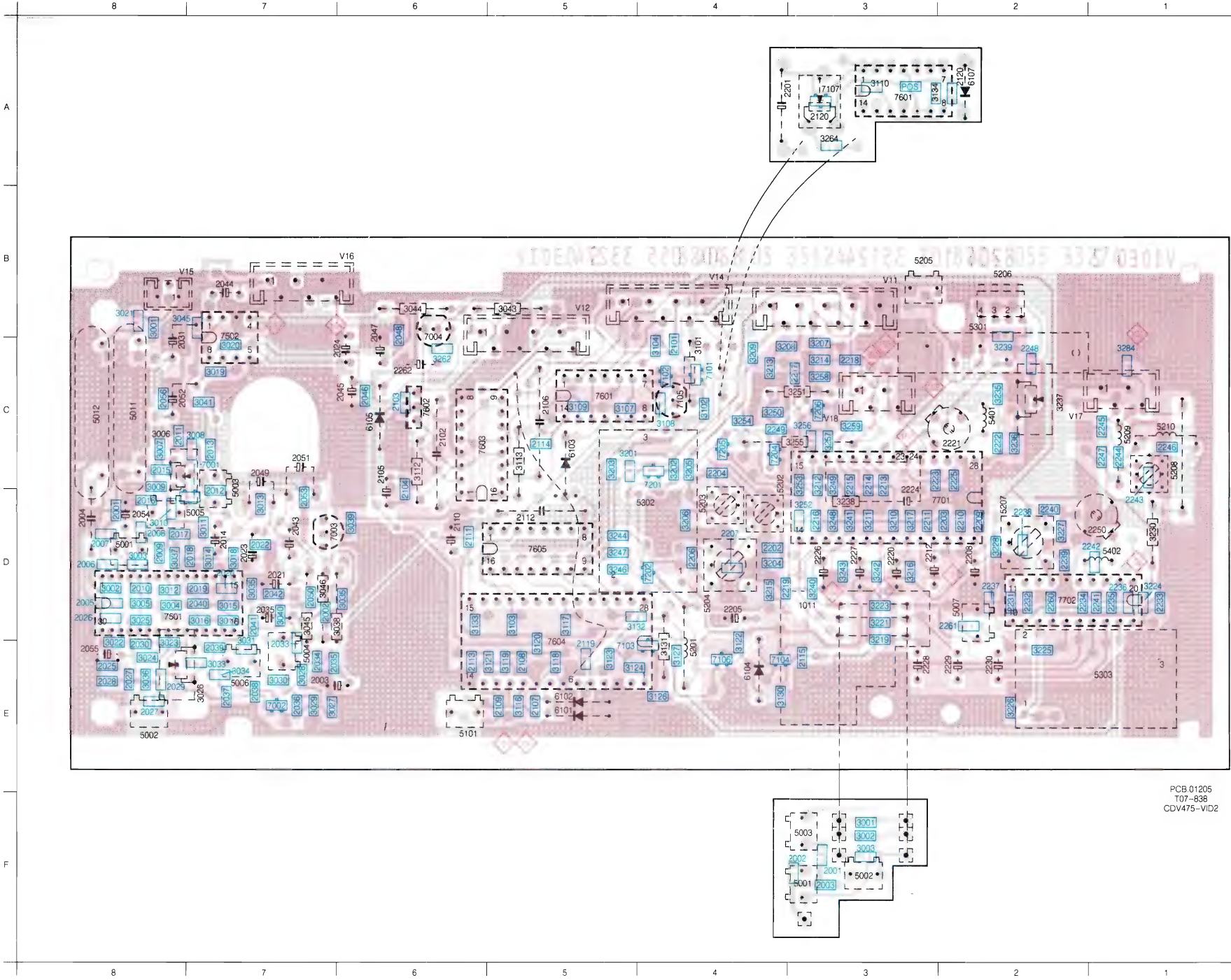




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2008	D	8	2225	C	2	3122	D	4	6104	E	4
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2111	D	6	3029	E	7	3262	C	6			
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2206	D	4	3043	B	5	5011	C	8			
2207	D	4	3044	B	6	5012	C	8			
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2208	D	3	3045	C	7	5201	E	4			
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2209	D	2	3101	C	4	5203	C	4			
2210	D	2	3102	C	4	5204	C	4			
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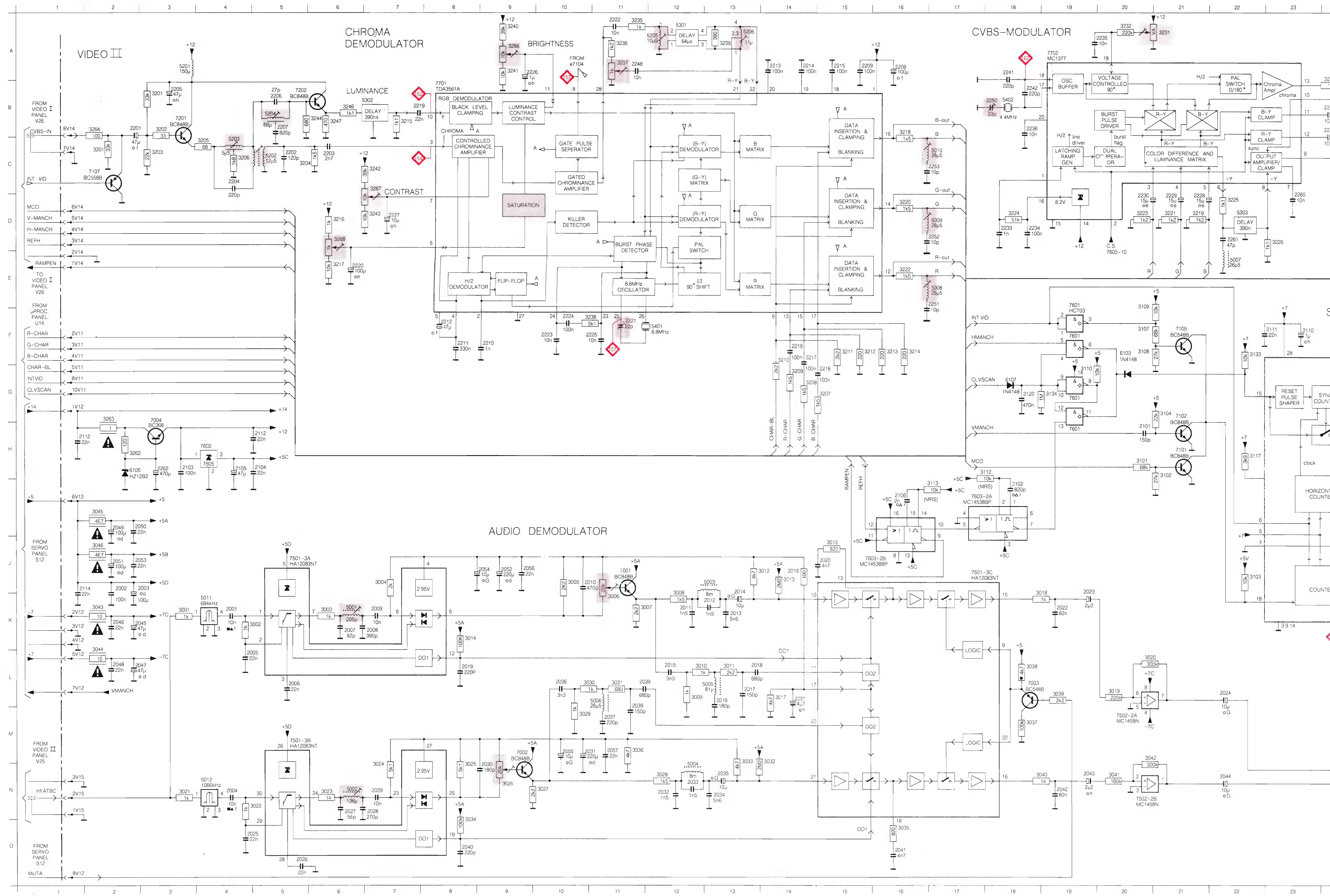
PRINT LAY-OUT CHIP SIDE VIDEO II-4



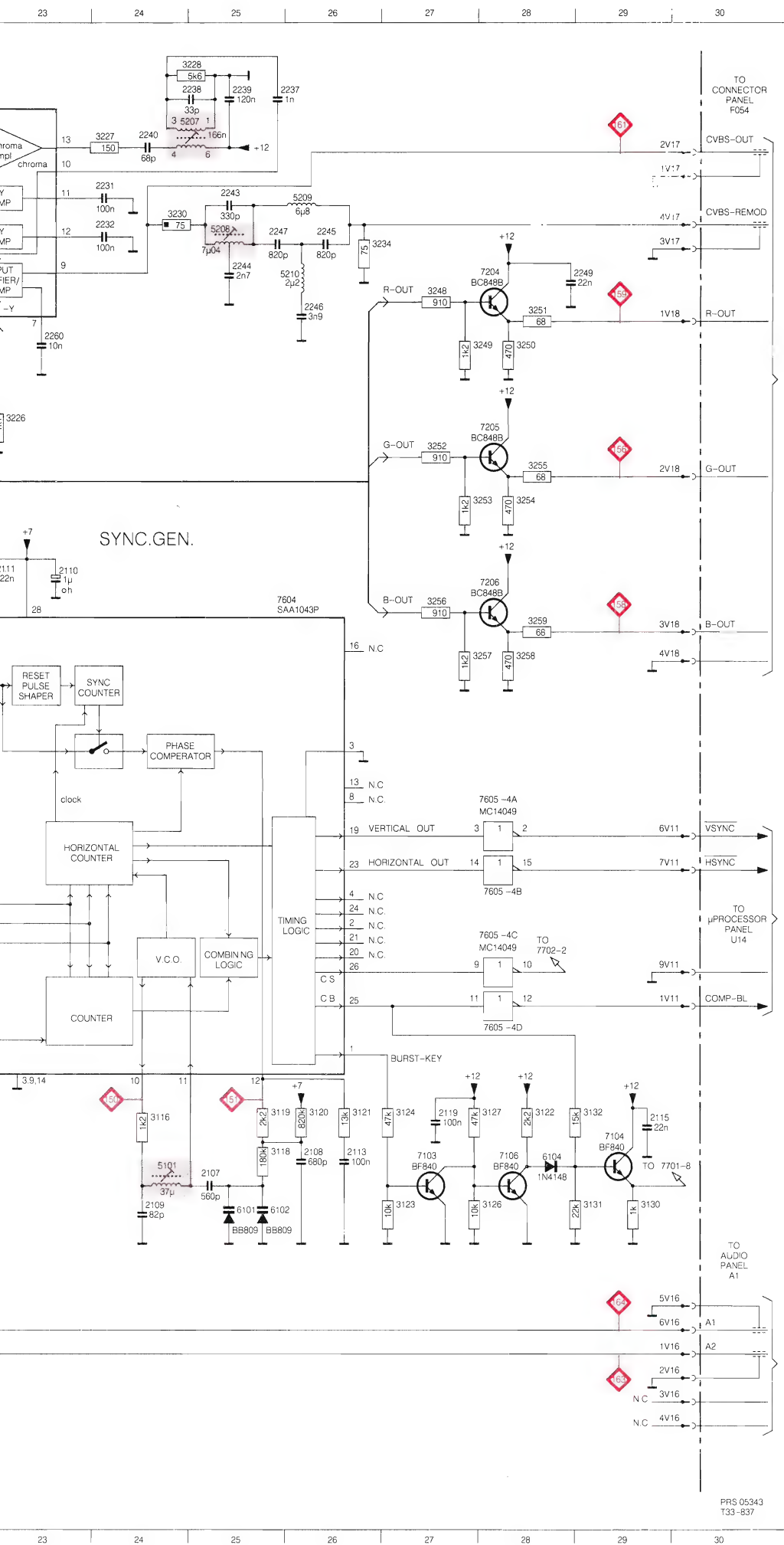
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2208	A16	3227	A24		
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2252	D17	5009	D17		
2253	C17	5010	C17		
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3013	J14	5303	D22		
3014	K 8	5401	F12		
3015	J15	5402	B18		
3016	J14	6101	L25		
3017	L14	6102	L25		

PRS 05343

T33-B37



# VIDEO II MEASUREMENTS AND ADJUSTMENTS SYNC. GENERATOR

STEP	SIGNAL	MODE					REMARKS
1	FREQUENCY	STOP	150	5101	FREQ. COUNTER		5MHz $\pm$ 10kHz COARSE
2	DC-LEVEL	STOP	151	5101		3.5V $\pm$ 50mV	FINE

## MEASUREMENTS AND ADJUSTMENTS LUM./CHROM./R.G.B.

STEP	SIGNAL	MODE					REMARKS
1	LUMINANCE	VIDEO TEST DISC COLOURBAR STILL PICTURE	152	5203			ADJUST FOR A MINIMUM COLOUR SIGNAL
2	LUMINANCE	VIDEO TEST DISC PICT. NO 10427	152 153	5204			
3	CHROMINANCE	VIDEO TEST DISC COLOURBAR STILL PICTURE	154	5202			ADJUST FOR MAXIMUM CHROMINANCE
4	VENETIAN BLINDS	VIDEO TEST DISC COLOURBAR STILL PICTURE	TV SCREEN	3237			ADJUST FOR MINIMUM "BLINDS" IN THE MAGENTA COLOUR
5	BRIGHTNESS	VIDEO TEST DISC GREY-SCALE STILL PICTURE	156	3266			BLANKING LEVEL = BLACK LEVEL
6	CONTRAST	VIDEO TEST DISC WHITE PICTURE STILL PICTURE	156	3267			
7	R.G.B.	VIDEO TEST DISC COLOURBAR STILL PICTURE	156	5205 OR 5206			ADJUST FOR MINIMAL JITTER
8	SATURATION	VIDEO TEST DISC COLOURBAR STILL PICTURE	156	3268			
9	SUB CARRIER	VIDEO TEST DISC COLOURBAR	157	2221	FREQ. COUNTER 8.86MHz		
10	R.G.B.	VIDEO TEST DISC COLOURBAR	156 158 159				
11	C.V.B.S	VIDEO TEST DISC COLOURBAR	161				
12	SUB CARRIER CVBS MOD	VIDEO TEST DISC COLOURBAR	162	2250	FREQ. COUNTER 4.433619MHz $\pm$ 30Hz		

## MEASUREMENTS AND ADJUSTMENTS AUDIO

STEP	SIGNAL	MODE					REMARKS
1	AUDIO L+R	VIDEO TEST DISC PICT NO 4615-5399 A-B REP	163 164	3006 3026	R.M.S. CINCH 625mV SCART 310mV		PM6309 DISTORTION METER
2	AUDIO DISTORTION	VIDEO TEST DISC PICT NO 4615-5399 A-B REP	163 164	5001 5002	$\geq$ 0.6%		PM6309 DISTORTION METER



## VIDEO ADJUSTMENTS SYNC. GENERATOR

MODE					REMARKS
STOP	150	5101	FREQ. COUNTER		5MHz $\pm$ 10kHz COARSE
STOP	151	5101		3.5V $\pm$ 50mV	FINE

## VIDEO ADJUSTMENTS LUM./CHROM./R.G.B.

MODE					REMARKS
VIDEO TEST DISC COLOURBAR STILL PICTURE	152	5203			ADJUST FOR A MINIMUM COLOUR SIGNAL
VIDEO TEST DISC PICT. NO 10427	152	5204			
VIDEO TEST DISC COLOURBAR STILL PICTURE	154	5202			ADJUST FOR MAXIMUM CHROMINANCE
VIDEO TEST DISC COLOURBAR STILL PICTURE	TV SCREEN	3237			ADJUST FOR MINIMUM 'BLINDS' IN THE MAGENTA COLOUR
VIDEO TEST DISC GREY-SCALE STILL PICTURE	156	3266			BLANKING LEVEL = BLACK LEVEL
VIDEO TEST DISC WHITE PICTURE STILL PICTURE	156	3267			
VIDEO TEST DISC COLOURBAR STILL PICTURE	156	5205 OR 5206			ADJUST FOR MINIMAL JITTER
VIDEO TEST DISC COLOURBAR STILL PICTURE	156	3268			
VIDEO TEST DISC COLOURBAR	157	2221	FREQ. COUNTER 8.66MHz		
VIDEO TEST DISC COLOURBAR	156 158 159				
VIDEO TEST DISC COLOURBAR	161				
VIDEO TEST DISC COLOURBAR	162	2250	FREQ. COUNTER 4.433619MHz $\pm$ 30Hz		

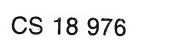
## VIDEO ADJUSTMENTS AUDIO

MODE					REMARKS
VIDEO TEST DISC PICT NO 4615-5399 A-B REP.	163	3006	R.M.S CINCH 625mV SCART 310mV		PM6309 DISTORTION METER
VIDEO TEST DISC PICT NO 4615-5399 A-B REP.	163	5001	$\geq$ 0.6%		PM6309 DISTORTION METER
	164	5002			



















	4822 122 10177 10NF 20% 25V 4822 121 51053 2NF 1% 250V 4822 122 10166 TUBULAR 22N 16V 4822 122 33156 100NF 63V 2221 4822 125 50045 TRIMMING CAPACITOR 1.8-22PF 250V 2250 4822 125 50207 TRIMMING CAPACITOR 2-33PF 250V	
	3269 4822 100 11214 TRIMMING POTENTIOMETER 1K 3006 4822 100 11215 TRIMMING POTENTIOMETER 20K 3026 4822 100 11215 TRIMMING POTENTIOMETER 20K 3237 4822 100 11214 TRIMMING POTENTIOMETER 1K 3266 5322 101 14066 TRIMMING POTENTIOMETER 10K PM10 3267 5322 101 14066 TRIMMING POTENTIOMETER 10K PM10 3268 5322 101 10294 TRIMMING POTENTIOMETER 1K PM 20 4822 111 30508 10E 5% 0.33W 4822 111 30508 10E 5% 0.33W 4822 111 30499 4E7 5% 0.33W 4822 116 53027 5K6 1% 06W 4822 111 30483 SAFETY.RES 1E PM5	
	5001 4822 156 11004 COIL 26.5 μH 5001 4822 157 53135 C3TV-FN 205.0 μH 5002 4822 157 53136 C3TV-FN 136.0 μH 5002 4822 156 11004 COIL 26.5 μH 5003 4822 157 53516 COIL 8.2 μH 5003 4822 156 11004 COIL 26.5 μH 5004 4822 157 53516 COIL 8.2 μH 5005 4822 157 53137 COIL 81.0 μH 5006 4822 156 11004 COIL 26.5 μH 5007 4822 156 11004 COIL 26.5 μH 5011 4822 242 71658 BAND PASS FILTER 684 KHZ 5012 4822 242 71659 BAND PASS FILTER 1066 KHZ 5101 4822 157 53257 COIL 37.0 μH 5201 4822 157 51247 COIL 150 μH 5202 4822 157 52874 COIL 12.5 μH L2 5203 4822 157 52873 COIL 5.5 μH L1 5204 4822 157 52875 COIL 66 μH L3 5205 4822 157 53131 COIL 10.9 μH 5206 4822 157 53258 COIL 11.0 μH 5207 4822 157 53259 COIL 166 NNF 10264 5208 4822 157 53217 COIL 7.04 μH 5209 4822 158 10604 COIL 6.8 μH 5210 4822 157 50963 COIL 2.2 μH 5301 4822 320 40051 DELAY LINE 771 5302 4822 320 40131 DELAY LINE 390 5303 4822 320 40131 DELAY LINE 270 5401 4822 242 70626 8.867238 MHZ 5402 4822 242 72045 4.433619 MHZ	

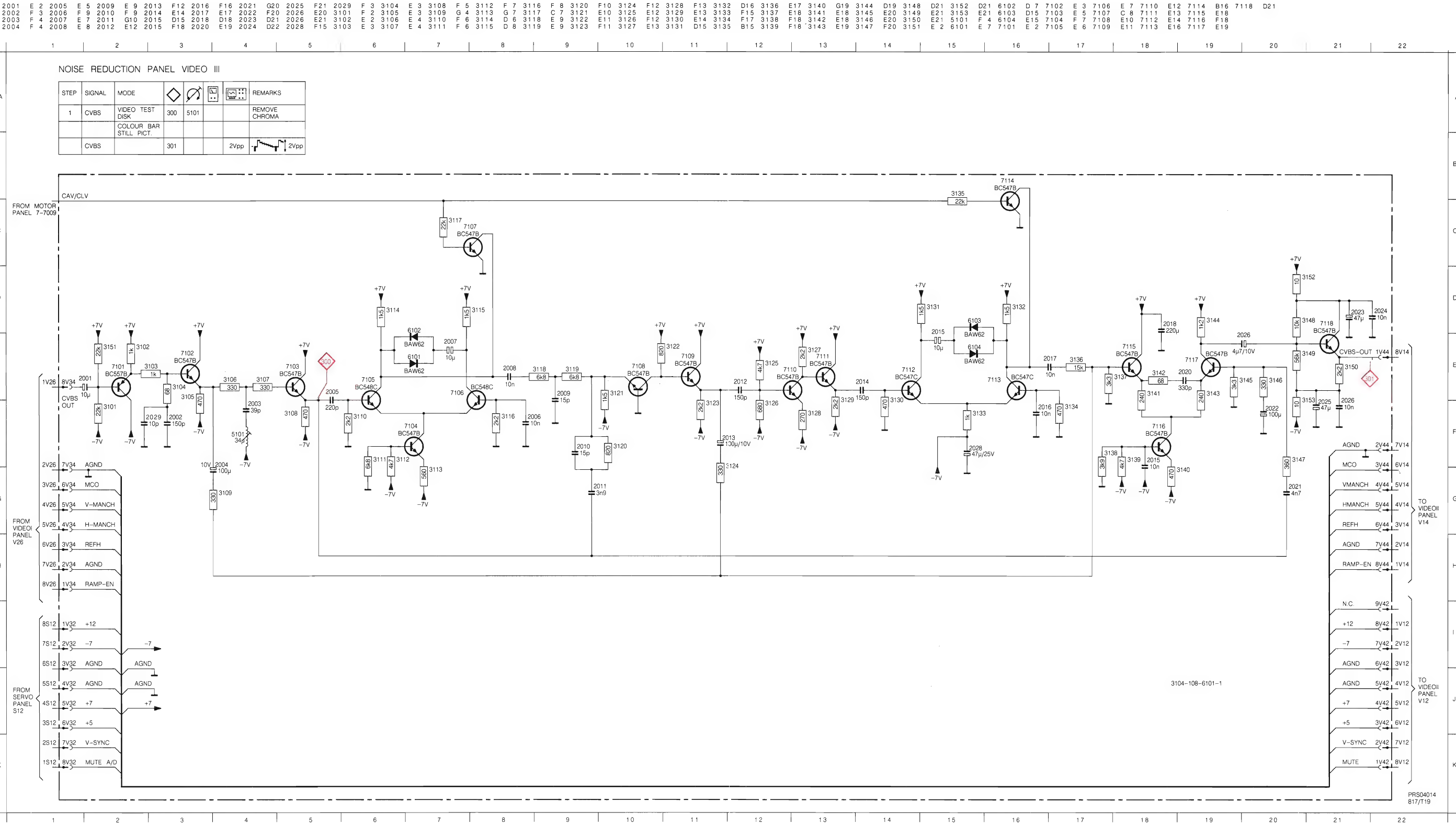
## Various



## PARTSLIST VIDEO II-5/05

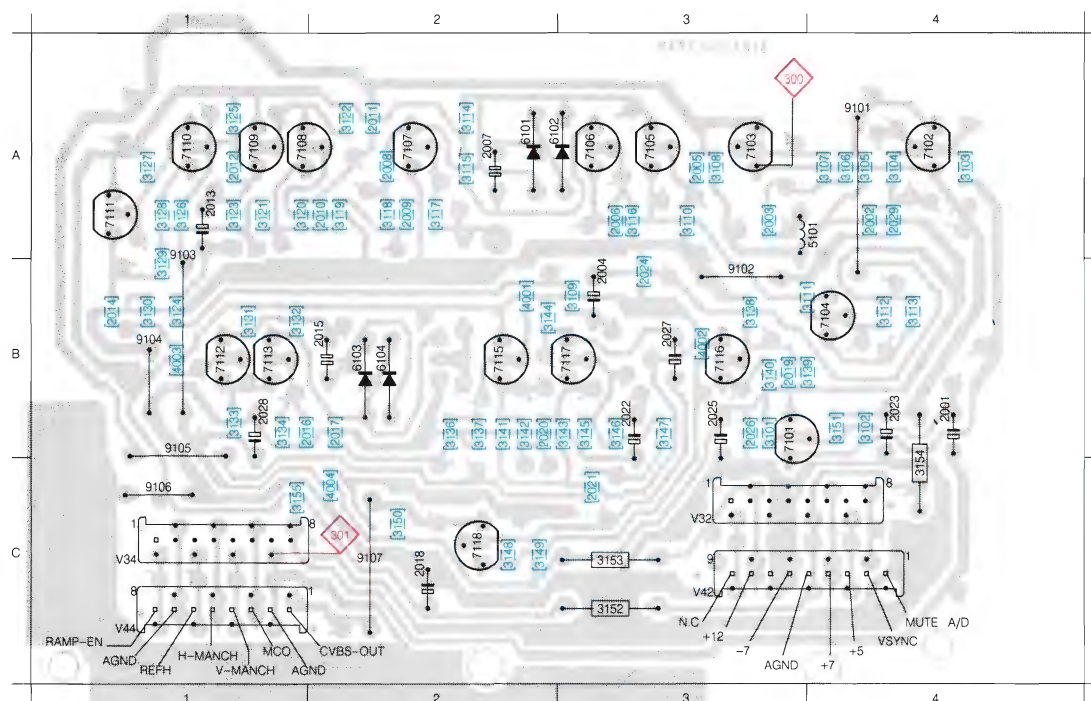
Various								
	4822 122 10177	10NF 20% 25V	6101	5322 130 31684	BB809			
	4822 121 51053	2NF 1% 250V	6102	5322 130 31684	BB809			
	4822 122 10166	22N 16V	6103	4822 130 30621	1N4148			
	4822 122 33156	100NF 63V	6104	4822 130 30621	1N4148			
	4822 125 50207	CAP TRIMMER 2-33PF 250V						
	4822 125 50045	CAP TRIMMER 1.8-22PF 250V						
								
	4822 111 30508	10E 5% 0.33W						
	4822 111 30499	4E7 5% 0.33W						
	4822 116 53027	5K6 1% 0.6W						
	4822 111 30483	1E						
3006	4822 100 11215	TRIMMING POTENTIOMETER 20K						
3026	4822 100 11215	TRIMMING POTENTIOMETER 20K						
3237	4822 100 11214	TRIMMING POTENTIOMETER 1K						
3266	5322 101 14066	TRIMMING POTENTIOMETER 10K PM10						
3267	5322 101 14066	TRIMMING POTENTIOMETER 10K PM10						
3268	5322 101 10294	TRIMMING POTENTIOMETER 1K PM10						
						7501 4822 209 72422 HA12083NT		
	4822 156 11004	COIL 26.5 μH				7602 4822 209 72042 MC78L05ACP		
	4822 157 53516	COIL 8.2 μH	7603 4822 209 81091 MC 14538BCP					
	4822 157 53137	COIL 81.0 μH	7604 5322 209 81468 SAA1043P					
	4822 157 53135	COIL 205.0 μH	7605 4822 209 72424 MC14049BCP					
	4822 157 53136	COIL 136.0 μH	7701 4822 209 71518 TDA3561					
	4822 242 71658	BAND PASS 684 KHZ	7702 4822 209 72419 MC1377					
	4822 242 71659	BAND PASS 1066 KHZ						
	4822 157 53257	COIL 37.0 μH						
	4822 157 51247	COIL 150 μH						
	4822 157 52874	COIL 12.5 μH L2						
	4822 157 52873	COIL 5.5 μH L1						
	4822 157 52875	COIL 66 μH L3						
	4822 157 53131	COIL 10.9 μH						
	4822 157 53258	COIL 11.0 μH						
	4822 157 53259	COIL 166 NNF 10264						
	4822 157 53217	COIL 7.04 μH						
	4822 158 10604	COIL 0.8 μH						
	4822 157 50963	COIL 6.8 μH						
5301	4822 320 40051	DELAY LINE 711						
5302	4822 320 40131	DELAY LINE 390						
5303	4822 320 40131	DELAY LINE 270						
5401	4822 242 70626	X-TAL 8.867238 MHZ						
5402	4822 242 72045	X-TAL 4.433619 MHZ						



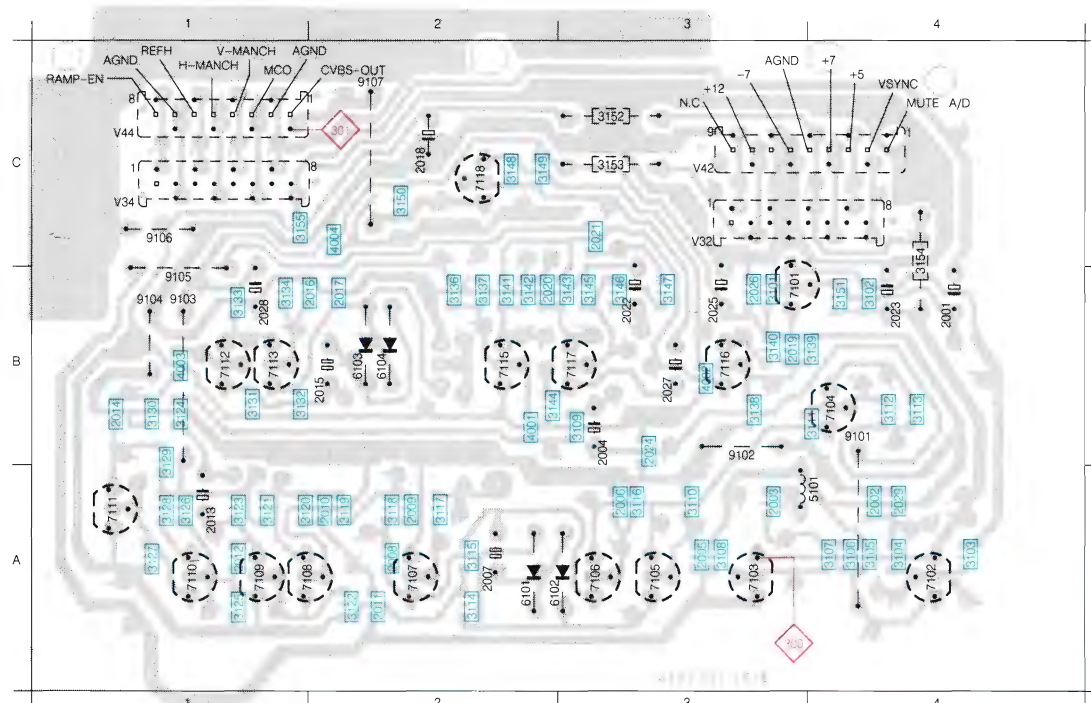




2001	B	4	2012	A	1	2023	B	4	3105	A	4	3116	A	3	3127	A	1	3139	B	3	3150	C	2	6101	A	2	7108	A	1	9102	B	3	1
2002	A	3	2013	A	1	2024	B	4	3106	A	4	3117	A	3	3128	A	1	3140	B	3	3151	B	3	6102	A	2	7109	A	1	9103	B	3	1
2003	A	3	2014	B	1	2025	B	3	3107	A	4	3118	A	2	3129	A	1	3141	B	3	3152	C	3	6103	B	2	7110	B	1	9104	B	1	1
2004	B	3	2015	B	2	2026	B	3	3108	A	3	3119	A	2	3130	B	1	3142	B	2	3153	C	3	6104	B	2	7111	A	1	9105	B	1	1
2005	A	3	2016	B	1	2027	B	3	3109	B	3	3120	A	1	3131	B	1	3143	B	3	3154	C	4	7101	B	3	7112	B	1	9106	C	2	1
2006	A	3	2017	B	2	2028	B	1	3110	A	3	3121	A	1	3132	B	1	3144	B	2	3155	C	1	7102	A	4	7113	B	1	9107	C	2	1
2007	A	2	2018	C	2	2029	A	4	3111	B	3	3122	A	2	3133	B	1	3145	B	3	4001	B	2	7103	A	3	7115	B	2	3	1	1	
2008	A	2	2019	B	3	3101	B	3	3112	B	4	3123	A	1	3134	B	1	3146	B	3	4002	B	3	7104	A	4	7116	B	3	3	1	1	
2009	A	2	2020	B	2	3102	A	4	3113	B	4	3124	B	1	3135	B	2	3147	B	3	4003	B	3	7105	A	3	7117	B	3	3	1	1	
2010	A	2	2021	B	3	3103	A	4	3114	B	3	3125	A	1	3136	B	2	3148	B	2	4004	C	2	7106	A	4	7118	C	2	3	1	1	
2011	A	2	2022	B	3	3104	A	4	3115	A	2	3126	B	1	3137	B	2	3149	C	2	5101	A	4	7107	A	2	9101	A	4	3	1	1	





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2001	A	4	2017	B	3	2024	B	3	3106	A	4	3117	A	3	3124	A	1	3140	B	3	3151	B	3	6102	A	2	7109	A	1	9103	B	3
2003	B	3	2014	B	1	2025	B	3	3107	A	4	3118	A	2	3129	A	1	3142	B	3	3152	C	3	6103	B	2	7110	A	1	9104	B	3
2004	B	3	2015	B	2	2026	B	3	3108	A	3	3119	A	2	3130	B	1	3142	B	2	3153	C	3	6104	B	2	7111	A	1	9105	B	1
2005	A	3	2016	B	1	2027	B	3	3109	B	3	3120	A	1	3131	B	1	3143	B	3	3154	C	4	7101	B	3	7112	B	1	9106	C	2
2006	A	3	2017	B	2	2028	B	1	3110	A	3	3121	A	1	3132	B	1	3144	B	2	3155	C	1	7102	A	4	7113	B	1	9107	C	2
2007	A	2	2018	C	2	2029	A	3	3111	B	4	3122	A	2	3133	B	1	3145	B	3	4001	B	2	7103	A	3	7115	B	2			
2008	A	2	2019	B	3	2101	B	3	3112	B	4	3123	A	1	3134	B	1	3146	B	3	4002	B	3	7104	A	4	7116	B	3			
2009	A	2	2020	C	2	2102	B	3	3113	B	4	3124	A	1	3135	B	1	3147	B	3	4003	B	2	7105	A	3	7117	B	2			
2010	A	2	2021	C	3	3103	A	4	3114	A	2	3125	A	1	3137	B	2	3148	C	2	4004	C	2	7106	A	3	7118	C	2			
2011	A	2	2022	B	3	3104	A	4	3115	A	2	3126	A	1	3138	B	3	3149	C	2	5101	A	4	7107	A	2	9101	A	4			



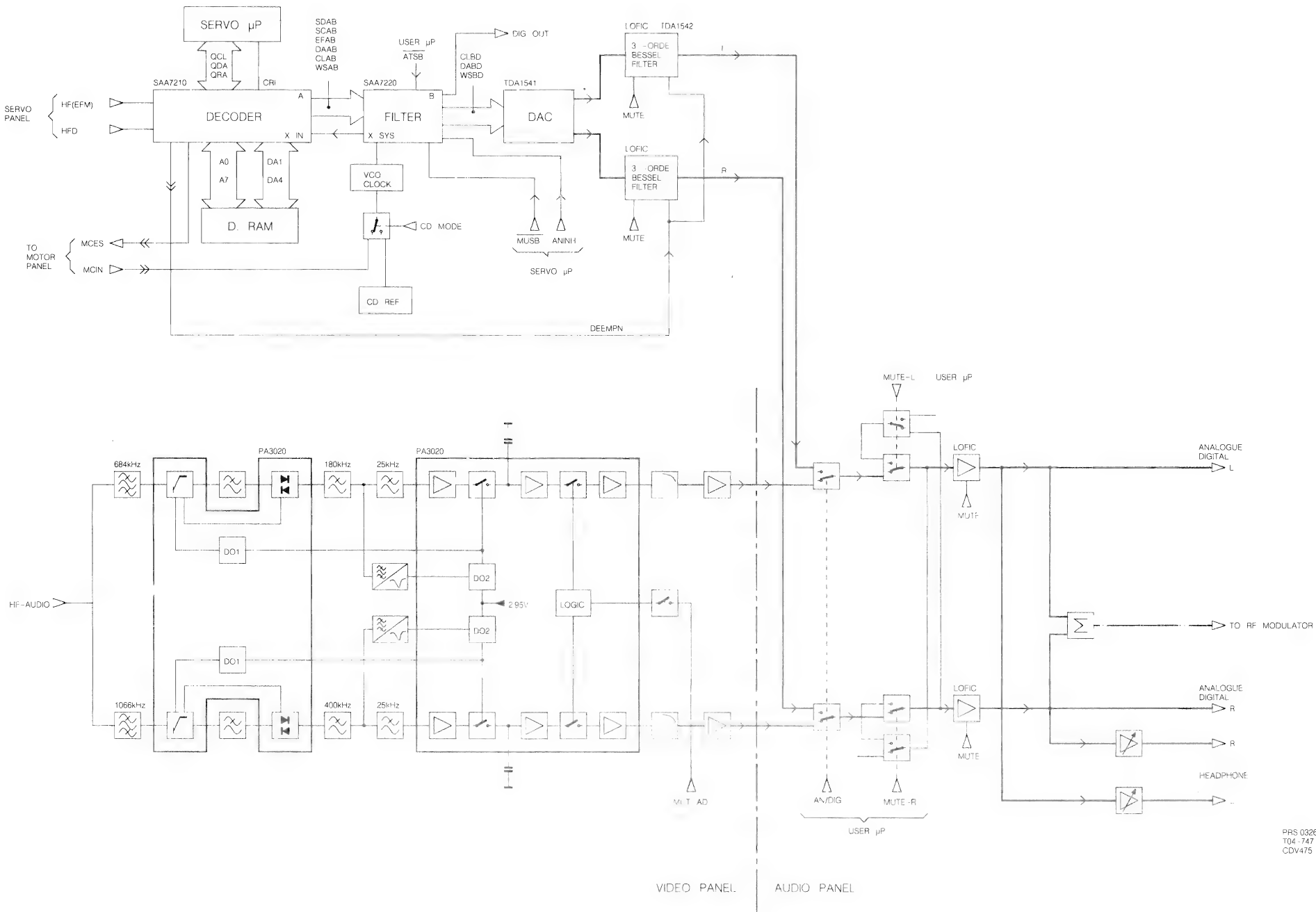


Video 3 Panel

	4822 124 41558	CAP. BIP 10μF 25V
	4822 130 40959	BC 546B
	4822 130 44196	BC 548C









AUDIO BLOCKDIAGRAM



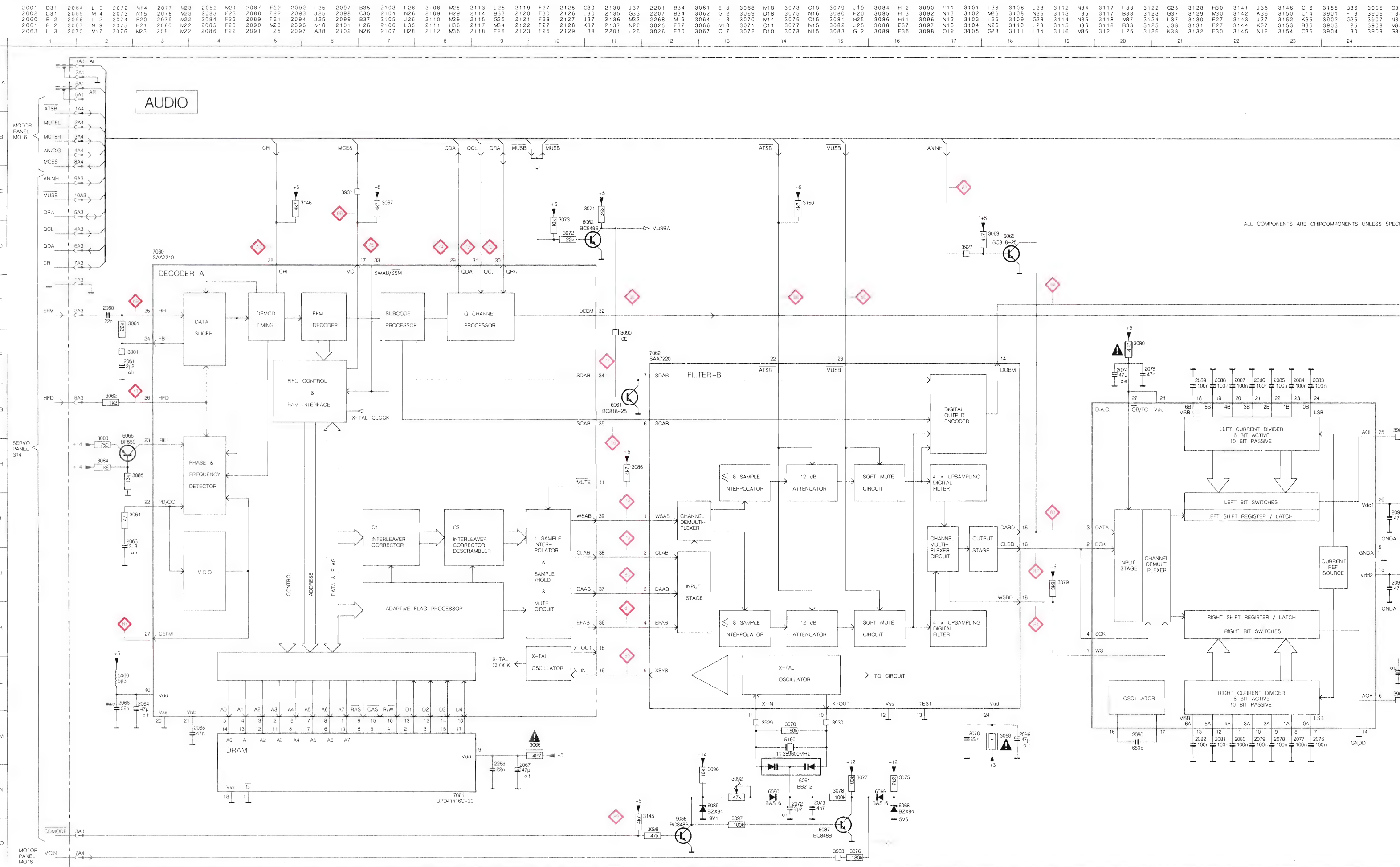
PRS 03260  
T04-747  
CDV475



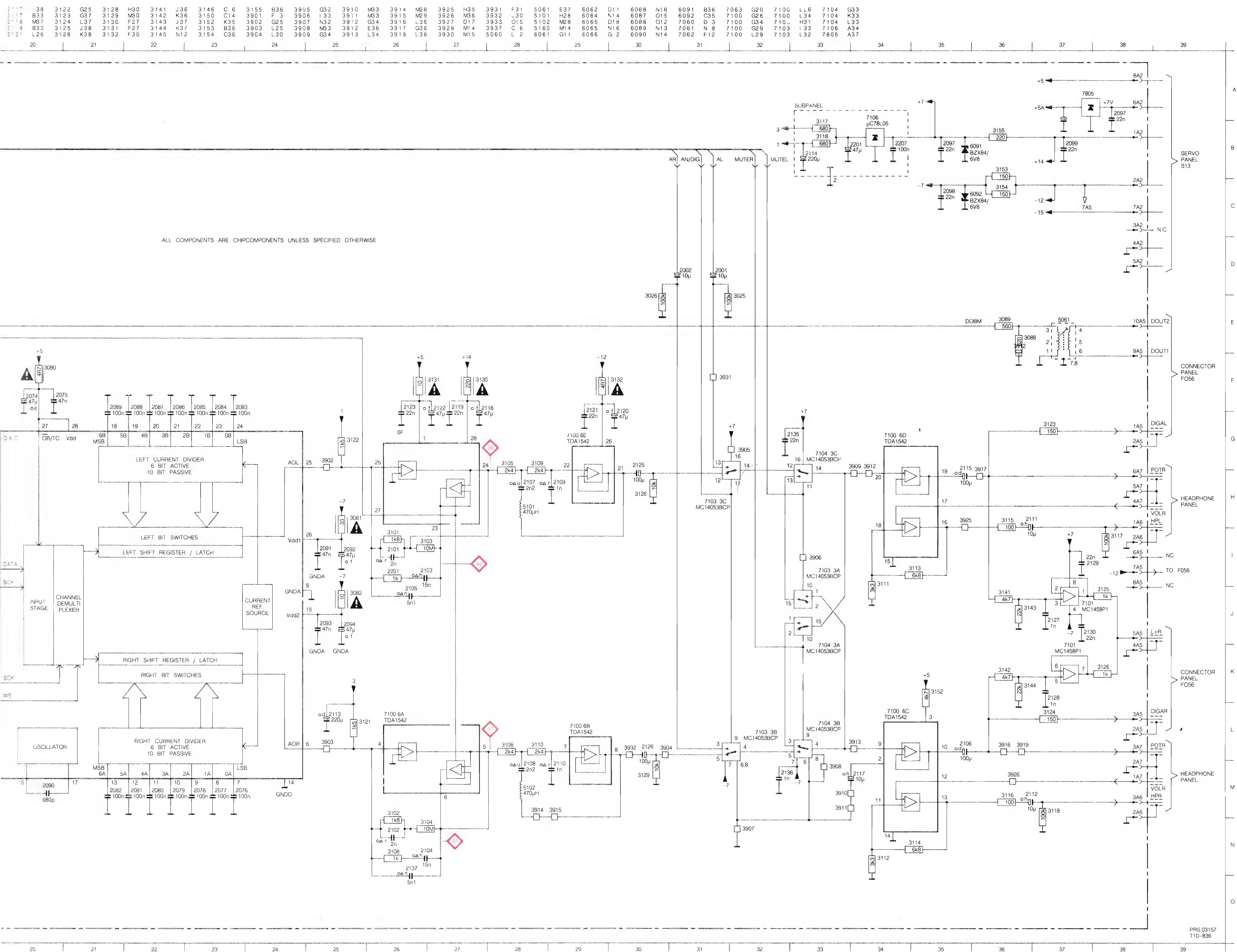
AUDIO PANEL

	4822 121 50879	2.2NF 160V		4822 130 31129	BB212	
				5322 130 31928	BAS16	
	4822 111 30499	4E7 5% 0.33W	6068	4822 130 33004	BZX84-B5V6	
	4822 111 30483	1R 5% 0.33W	6089	4822 130 33996	BZX84-C9V1	
	4822 111 30522	33E 5% 0.33W	6091	4822 130 33523	HZ7A3 6V8	
	4822 111 30508	10E 5% 0.33W	6092	4822 130 33523	HZ7A3 6V8	
	4822 111 30535	100E 5% 0.33W				
	4822 116 52398	150E 5%	7060	4822 209 71001	SAA7210P/04	
	4822 116 52407	220E 5%	7061	4822 209 70422	IC UPP41416C-20	
3092	4822 100 10872	TRIMMING POTENTIOMETER 47K	7062	4822 209 11157	SAA7220	
	5099	4822 158 10101	COIL	7063	4822 209 72544	TDA 1541A/N2
	5101	4822 157 51193	470 μH PM10	7100	4822 209 71768	TDA 1542/N2
	5102	4822 157 51193	470 μH PM10	7101	4822 209 81349	MC 1458 P1 MTLA
	5160	4822 242 71644	X-TAL 11.289600 MHZ	7103	5322 209 10576	MC14053BCP
	5061	4822 148 80281	DIGITAL-OUT TRANSFORMER	7104	5322 209 10576	MC14053BCP
	4822 130 42696	BC818-25	7106	4822 209 72042	IC VOLTREG 78L05ALP	
	4822 130 42131	BF550	7106	4822 209 72042	VOLT.REG MC78L05 ALP	
	5322 130 41982	BC848B				





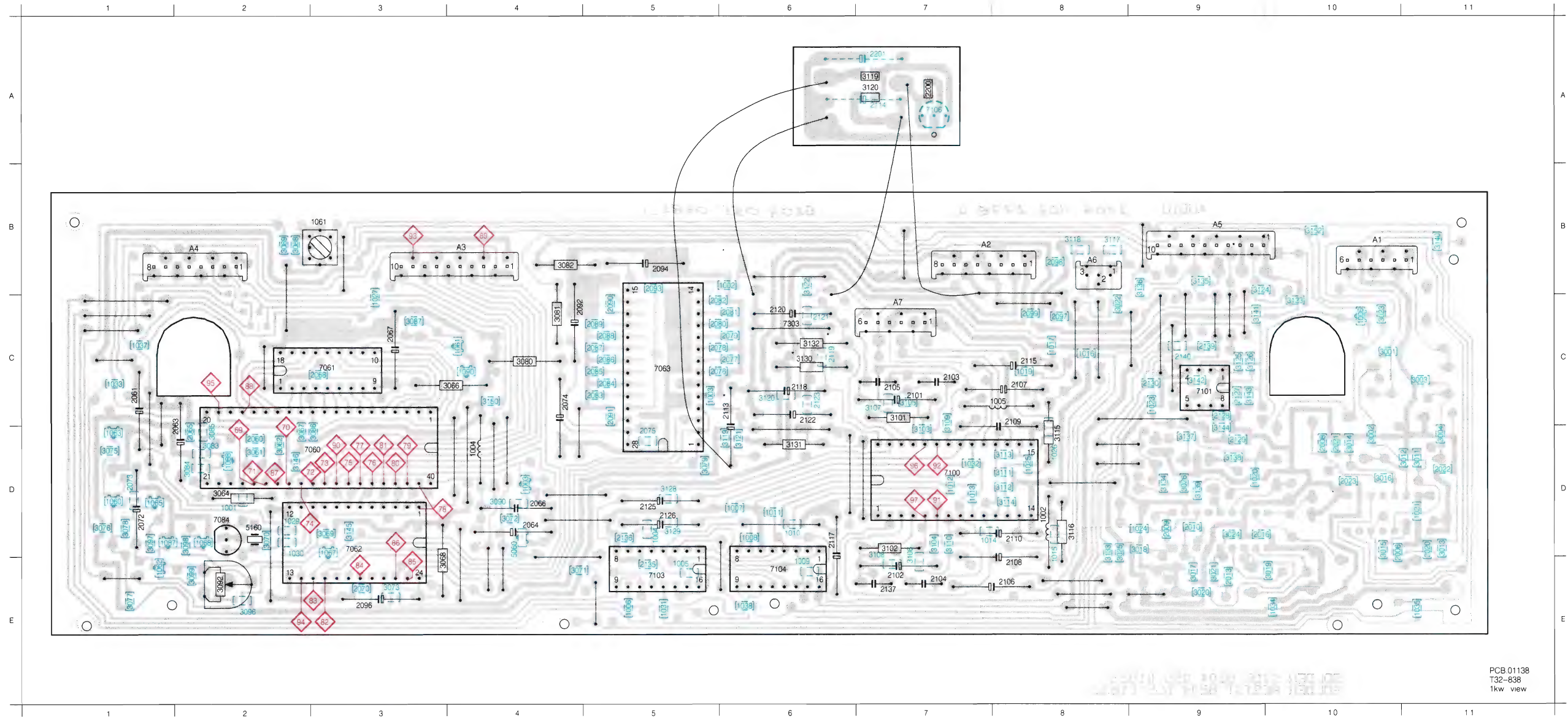






PRINT LAY-OUT COMP-SIDE WITH SMALL SUB. PANEL

1001 D 2	1006 E 5	1014 D 7	1025 D 8	1035 E 11	1067 D 3	2013 E 9	2064 D 4	2075 D 5	2084 C 5	2093 B 5	2104 E 7	2115 C 8	2126 D 5	2140 C 9	3013 D 11	3022 C 8	3067 D 2	3077 E 1	3086 D 3	3099 E 2	3109 C 7	3118 B 8	3125 C 9	3135 B 9	3144 D 9	7062 D 3
1002 B 6	1006 C 10	1015 D 8	1026 D 8	1037 C 1	1068 D 2	2016 D 9	2065 D 2	2076 C 6	2085 C 5	2094 B 5	2105 C 7	2117 D 6	2127 C 9	2200 A 7	3014 D 10	3023 C 10	3068 E 3	3078 D 1	3087 C 3	3101 C 7	3110 D 7	3119 D 6	3126 C 9	3136 B 9	3145 D 3	7063 C 5
1002 D 8	1007 D 6	1016 C 8	1027 C 3	1038 E 6	1087 D 1	2020 D 11	2066 D 4	2077 C 6	2086 C 5	2096 B 5	2106 E 8	2118 C 6	2128 C 9	2201 A 7	3015 D 10	3024 D 9	3069 D 3	3079 D 5	3088 B 2	3102 D 7	3111 D 8	3119 A 7	3128 C 9	3137 D 9	3146 D 2	7064 D 2
1003 D 4	1008 D 6	1017 C 8	1029 D 2	1060 D 1	1088 D 2	2021 D 10	2067 C 3	2078 C 6	2087 C 5	2097 C 8	2107 C 8	2119 C 6	2129 D 9	3001 C 10	3016 D 10	3025 D 8	3070 D 2	3080 C 4	3089 B 2	3103 D 7	3112 D 8	3120 C 6	3129 D 5	3138 D 9	3150 C 4	7100 D 7
1003 C 5	1009 E 6	1019 C 8	1030 D 2	1061 C 4	1090 C 4	2022 D 11	2068 C 3	2079 C 6	2088 C 5	2098 B 8	2108 E 8	2120 C 6	2130 C 9	3002 D 10	3017 E 9	3026 D 9	3071 E 4	3081 C 4	3090 D 4	3104 D 7	3113 D 8	3120 A 7	3130 C 6	3139 D 9	3152 B 10	7101 C 9
1004 D 5	1010 D 6	1020 D 9	1031 E 5	1061 B 3	2006 D 10	2023 D 10	2070 E 3	2080 C 6	2089 C 5	2099 C 8	2109 C 8	2121 C 6	2135 E 5	3003 C 11	3018 D 9	3061 D 2	3072 D 4	3082 B 4	3092 E 2	3105 C 7	3114 D 8	3121 D 6	3131 D 6	3140 B 11	5060 D 4	7103 E 5
1004 D 4	1011 D 6	1021 D 11	1032 D 7	1062 E 1	2008 D 10	2060 D 2	2072 D 1	2081 C 6	2090 C 5	2101 C 7	2110 D 8	2122 C 6	2136 D 5	3004 D 11	3019 E 10	3062 D 2	3073 E 3	3083 D 2	3096 E 2	3106 D 7	3115 D 8	3122 C 6	3132 C 6	3141 C 9	5160 D 2	7104 E 6
1005 E 5	1012 D 7	1023 C 9	1033 C 1	1063 D 1	2009 D 9	2061 C 1	2073 D 1	2082 C 6	2091 C 5	2102 E 7	2113 C 6	2123 C 6	2137 E 7	3011 D 11	3020 E 9	3064 D 2	3075 D 1	3084 D 2	3097 D 1	3107 C 7	3116 D 8	3123 C 10	3133 D 8	3142 C 9	7060 D 3	7106 A 7
1005 C 8	1013 D 7	1024 D 9	1034 E 10	1065 D 1	2010 D 9	2063 C 2	2074 C 4	2083 C 5	2092 C 4	2103 C 7	2114 A 7	2125 D 5	2139 C 9	3012 D 11	3021 E 9	3066 C 4	3076 D 1	3085 D 2	3098 D 2	3108 D 7	3117 B 8	3124 B 9	3134 D 9	3143 C 9	7061 C 3	7303 C 6

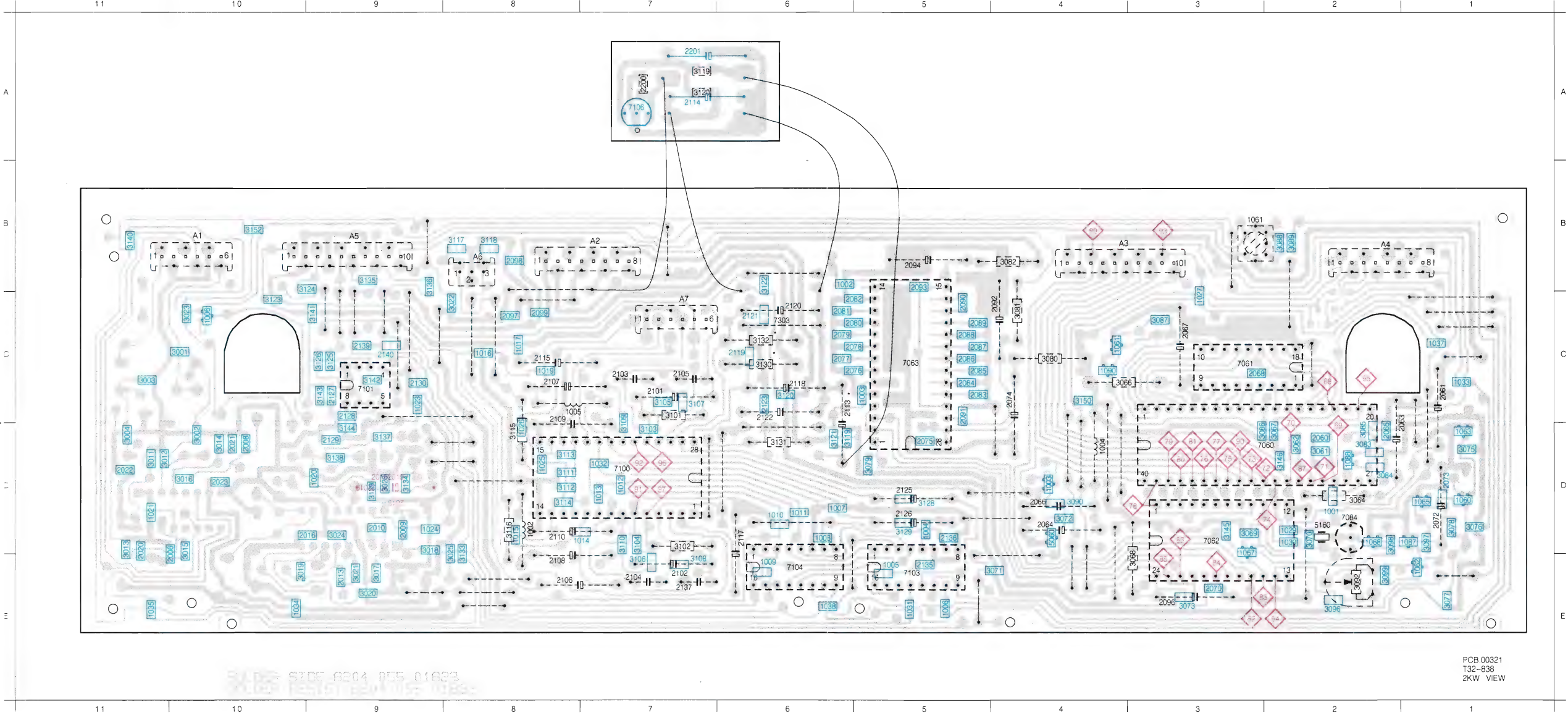


PCB 01138  
T32-838  
1kw view



PRINT LAY-OUT CHIP-SIDE SMALL SUB. PANEL

1001 D 2	1006 E 5	1014 D 8	1025 D 8	1035 E 11	1067 D 3	2013 E 9	2064 D 4	2075 D 5	2084 C 5	2093 B 5	2104 E 7	2115 C 8	2126 D 5	2140 C 9	3013 D 11	3022 C 8	3067 D 2	3077 E 1	3086 D 2	3099 E 2	3109 C 7	3118 B 8	3125 C 9	3135 B 9	3144 D 9	7062 D 3
1002 B 6	1006 C 10	1015 D 8	1026 D 8	1037 C 1	1068 D 2	2016 D 10	2065 D 2	2076 C 6	2085 C 5	2094 B 5	2105 C 7	2117 C 6	2127 C 9	2200 A 7	3014 D 10	3023 C 10	3068 E 3	3078 D 1	3087 C 3	3101 C 7	3110 D 7	3119 D 5	3126 C 9	3136 B 9	3145 D 3	7063 C 5
1002 D 8	1007 D 6	1016 C 8	1027 C 3	1038 F 6	1067 D 2	2020 D 11	2066 D 4	2077 C 6	2086 C 5	2096 F 3	2106 E 8	2118 C 6	2128 C 9	2201 A 7	3015 D 10	3024 D 9	3069 D 3	3079 D 5	3088 B 2	3102 D 7	3111 D 8	3119 A 7	3128 D 5	3137 D 9	3146 D 2	7064 D 2
1003 D 4	1008 D 6	1017 C 8	1029 D 2	1060 D 1	1068 D 2	2021 D 10	2067 C 3	2078 C 6	2087 C 5	2097 C 8	2107 C 8	2119 C 6	2129 D 9	3001 C 11	3016 D 11	3025 D 8	3070 D 3	3080 C 4	3089 B 2	3103 D 7	3112 D 8	3120 C 6	3129 D 5	3138 D 9	3150 C 4	7100 D 7
1003 C 5	1009 E 6	1019 C 8	1030 D 2	1061 C 4	1090 C 4	2022 D 11	2068 C 3	2079 C 6	2088 C 5	2098 B 8	2108 E 8	2120 C 6	2130 C 9	3002 D 10	3017 E 9	3026 D 9	3071 E 5	3081 C 4	3090 D 4	3104 D 7	3113 D 8	3120 A 7	3130 C 6	3139 D 9	3152 B 10	7101 C 9
1004 D 5	1010 D 6	1020 D 9	1031 E 5	1061 B 3	2006 D 10	2023 D 10	2070 E 3	2080 C 6	2089 C 5	2099 C 8	2109 C 8	2121 C 6	2135 E 5	3003 C 11	3018 D 9	3061 D 2	3072 D 4	3082 B 5	3092 E 2	3105 C 7	3114 D 8	3121 D 6	3131 D 6	3140 B 11	5060 D 4	7103 E 5
1004 D 4	1011 D 6	1021 D 11	1032 D 7	1062 E 1	2008 D 10	2060 D 2	2072 D 1	2081 C 6	2090 C 5	2101 C 7	2110 D 8	2122 C 6	2136 D 5	3004 D 11	3019 E 9	3062 D 2	3073 E 3	3083 D 2	3096 E 2	3106 E 7	3115 D 8	3122 B 6	3132 C 6	3141 C 9	5160 D 2	7104 E 6
1005 E 5	1012 D 7	1023 C 9	1033 C 1	1063 D 1	2009 D 9	2061 C 1	2073 D 1	2082 C 6	2091 C 5	2102 E 7	2113 C 6	2123 C 6	2137 E 7	3011 D 11	3020 E 9	3064 D 2	3075 D 1	3084 D 2	3097 D 1	3107 C 7	3116 D 8	3123 C 10	3133 D 8	3142 C 9	7060 D 3	7106 A 7
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PCB 00321  
T32-838  
2KW VIEW

OVERL BEH BU PCB 00321






## MEASUREMENTS &amp; ADJUSTMENTS

## AUDIO ELECTRICAL MEASUREMENTS AND ADJUSTMENTS


SIGNAL	MODE				REMARKS
HF	TESTDISC 5 PLAY	69		EYE PATTERN	SEE DRAWING 37017B8
CRI	TESTDISC 5A SCAN REV,FWD	70			SEE DRAWING MDA.01552
HFD	TESTDISC 5A TRACK 15,PLAY	71		PULSES LOW	SEE DRAWING MDA.00240
QRA	TESTDISC 5A PLAY	72			} SEE DRAWING MDA.00453
QCL	TESTDISC 5A PLAY	73			
QDA	TESTDISC 5A PLAY	74			
SWAB	TESTDISC 5A PLAY	75			} SEE DRAWING MDA.00239
SCAB	TESTDISC 5A PLAY	76			
SDAB	TESTDISC 5A PLAY	77			
WSAB	DISC PLAY	78			} SEE DRAWING 38847c12
CLAB	DISC PLAY	79			
DAAB	DISC PLAY	80			
EFAB	TESTDISC 5A	81			WHEN THE DISC IS SLOWLY BRAKED BY HAND
CLBD	DISC PLAY	82			} SEE DRAWING 38848C12
DABD	DISC PLAY	83			
WSBD	DISC PLAY	84			
MUSB	DISC PAUZE OR NEXT OR PREVIOUS	85		LOW	
ATSB	DISC SCAN	86		LOW	
CEFM	TESTDISC 5A PLAY	87		4.32MHz	
MC	CD PLAY	88			SEE DRAWING 38849A12
MC IN	CDV VIDEO TRACK PLAY	89			DC LEVEL VARYING ROUND 0 VOLT
DEEM	TESTDISC 5A TRACK 14: PLAY TRACK 15: PLAY	90		LOW HIGH	
TEST POINT 91	TESTDISC 5A TRACK 14	91		NO SIGNAL	
TEST POINT 91	TESTDISC 5A TRACK 15	91		LF SIGNAL	
TEST POINT 92	TESTDISC 5A TRACK 14	92		NO SIGNAL	
TEST POINT 92	TESTDISC 5A TRACK 15	92		LF SIGNAL	
ANINH	CD ROM DISC PLAY	93	0.6 VOLT DC		
DOBM	TESTDISC 5A PLAY	94			SEE DRAWING MDA.00238
X-TAL	TESTDISC 5A PLAY CDVDISC VIDEO TRACK	95		11.28MHz VARYING	
OUTPUT OF OPAMP	DISC PLAY	96		LF SIGNAL	LEFT CHANNEL
OUTPUT OF OPAMP	DISC PLAY	97		LF SIGNAL	RIGHT CHANNEL



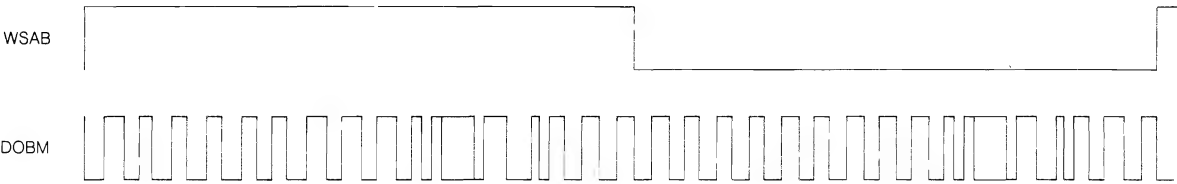
ADJUSTMENTS SYSTEMCLOCK

STEP	SIGNAL	MODE				REMARKS
1	XSYS	POWER ON	95	R3092	11,289600 ±300Hz	

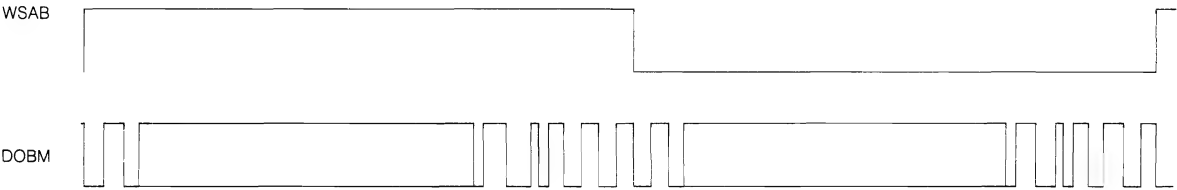
MDA 01551  
T02/836

POSITION	PLAYER	POWER ON	PLAY	SCAN REV FWD
CRI		"LOW"	"HIGH"	

MDA 01552  
T02/836



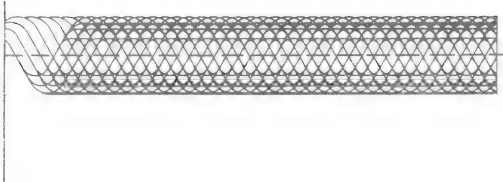
POS. STAND-BY 2µS/DIV



POS. PLAY AUDIO INFORMATION 2µS/DIV

MDA 00238  
T07/733

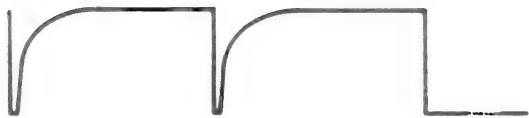




37 017 B8



POSITION: STAND BY.



POSITION: PLAY (BEGINNING)

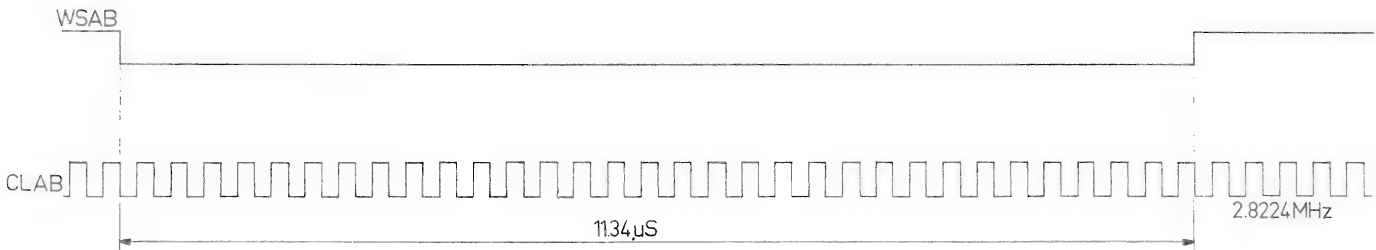


POSITION: PLAY (NORMAL)

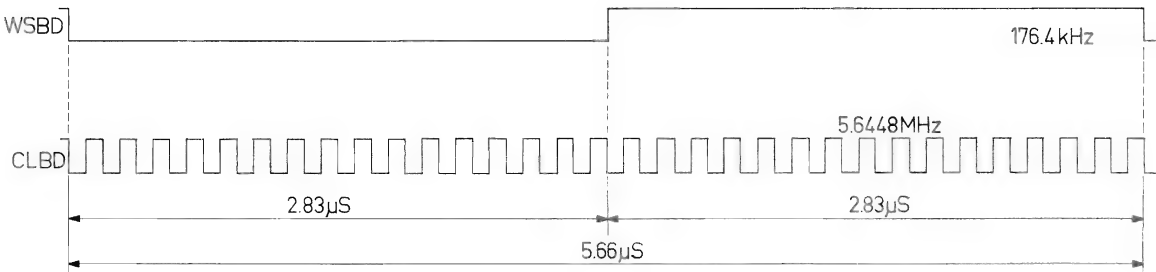
38 849 A12



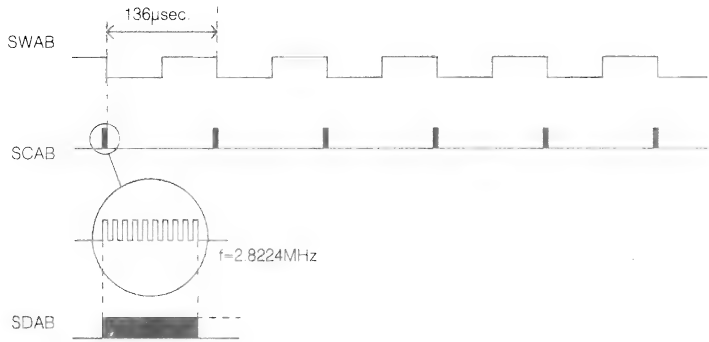
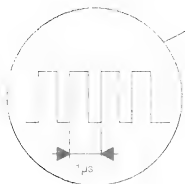
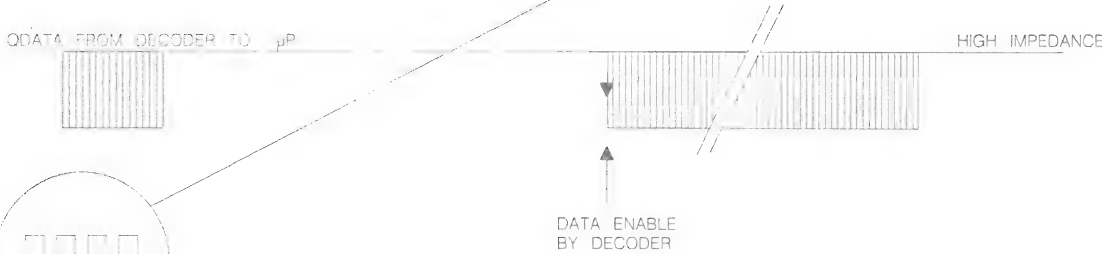
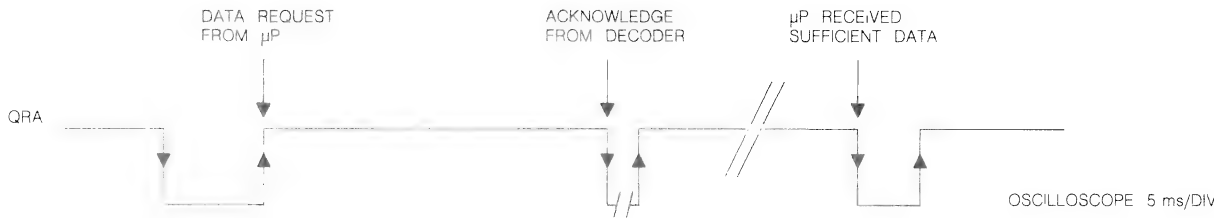
MDA 00240  
T07-804



38 847 C12



38 848 C12



MDA 00239  
T12/638

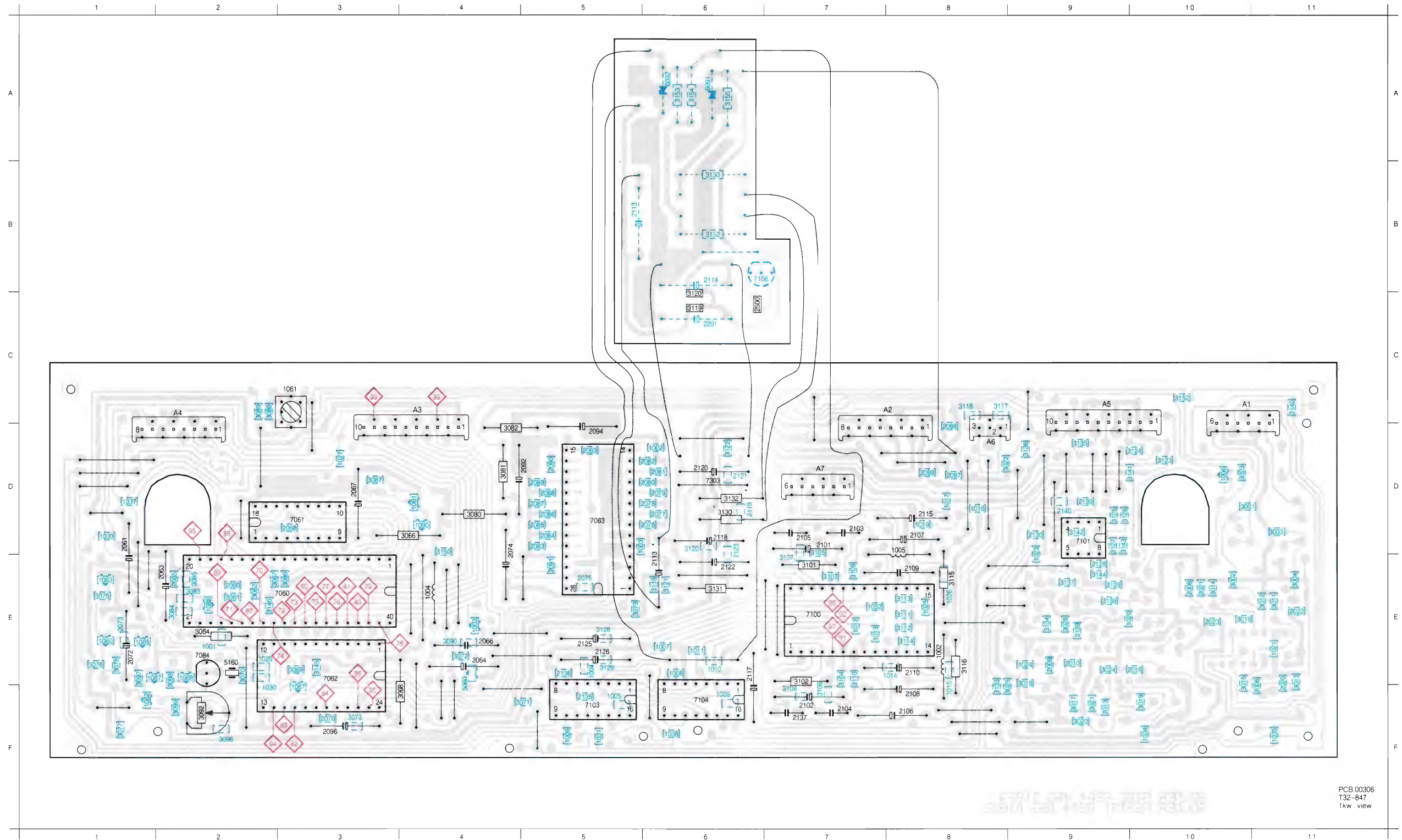
00450

MDA 00453  
T27/649



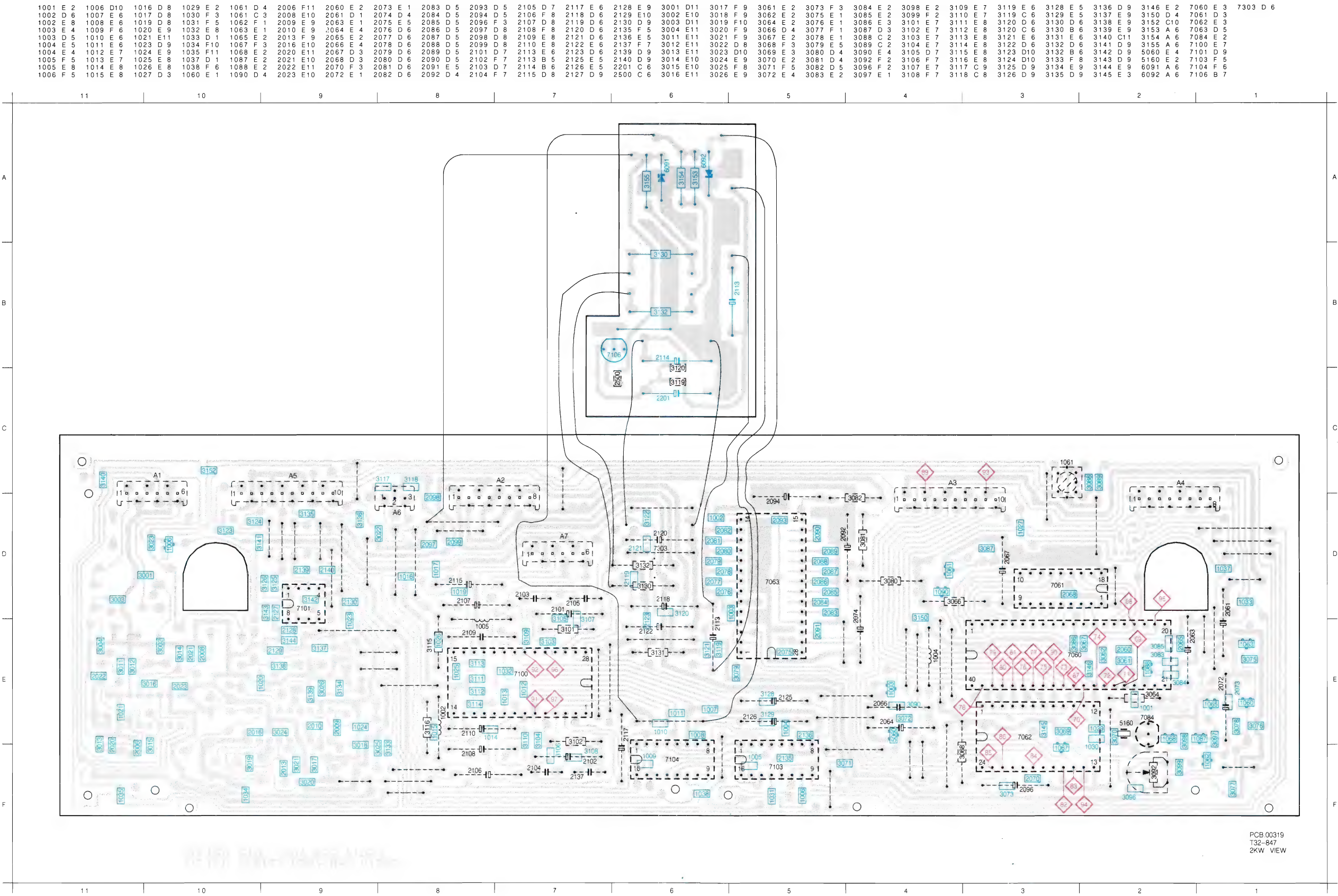
PRINT LAY-OUT COMP-SIDE WITH LARGE SUB. PANEL

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1002	D 6	1007	E 6	1017	D 8	1030	F 2	1061	C 3	2008	E10	2061	D 1	2074	D 4	2084	D 5	2094	D 5	2106	F 8	2118	D 6	2129	E 9	3002	E10	3018	E 9	3062	E 2	3075	E 1	3085	E 2	3099	F 2	3110	E 7	3119	C 6	3129	E 5	3137	E 9	3150	D 4	7061	D 3		
1002	E 8	1008	E 6	1019	D 8	1031	F 5	1062	F 1	2009	E 9	2063	E 2	2075	E 5	2085	D 5	2096	F 3	2107	D 8	2119	D 6	2130	D 9	3003	D11	3019	F10	3064	E 2	3076	E 1	3086	E 3	3101	E 7	3111	E 8	3120	D 6	3130	D 6	3138	E 9	3152	C10	7062	E 3		
1003	D 5	1009	F 6	1020	E 9	1032	E 7	1063	E 1	2010	E 9	2064	E 4	2076	D 6	2086	D 5	2097	D 8	2108	F 8	2120	D 6	2135	F 5	3004	E11	3020	F 9	3065	D 4	3077	F 1	3087	D 3	3102	E 7	3112	E 8	3120	C 6	3130	B 6	3139	E 9	3153	A 6	7063	D 5		
1003	D 5	1010	E 6	1021	E11	1033	D 1	1065	E 1	2013	F 9	2065	E 2	2077	D 6	2087	D 5	2098	D 8	2109	E 8	2121	D 6	2136	F 6	3011	E11	3021	F 9	3067	E 2	3078	E 1	3088	C 2	3103	E 7	3113	E 8	3121	E 6	3131	E 6	3140	C11	3154	A 6	7084	E 2		
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1004	E 4	1012	E 7	1024	E 9	1035	F11	1068	E 2	2020	E11	2067	D 3	2079	D 6	2089	D 5	2101	D 7	2113	E 6	2123	D 6	2139	D 9	3013	E11	3023	D10	3069	E 3	3080	D 4	3090	E 4	3105	D 7	3115	E 8	3123	D10	3132	B 6	3142	D 9	5060	E 4	7101	D 9		
1005	F 5	1013	E 7	1025	E 8	1037	D 1	1087	E 2	2021	E10	2068	D 3	2080	D 6	2090	D 5	2102	F 7	2113	B 5	2125	E 5	2140	D 9	3014	E10	3024	E 9	3070	E 2	3081	D 4	3092	F 2	3106	F 7	3116	E 8	3124	D10	3133	E 8	3143	D 9	5160	E 2	7103	F 5		
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1006	F 5	1015	F 8	1027	D 3	1060	E 1	1090	D 4	2023	E10	2072	E 1	2082	D 6	2092	D 5	2104	F 7	2115	D 8	2127	D 9	2500	C 6	3016	E10	3026	E 9	3072	E 4	3083	E 2	3097	E 1	3108	F 7	3118	C 8	3126	D 9	3135	D 9	3145	E 3	6092	A 6	7106	B 7		





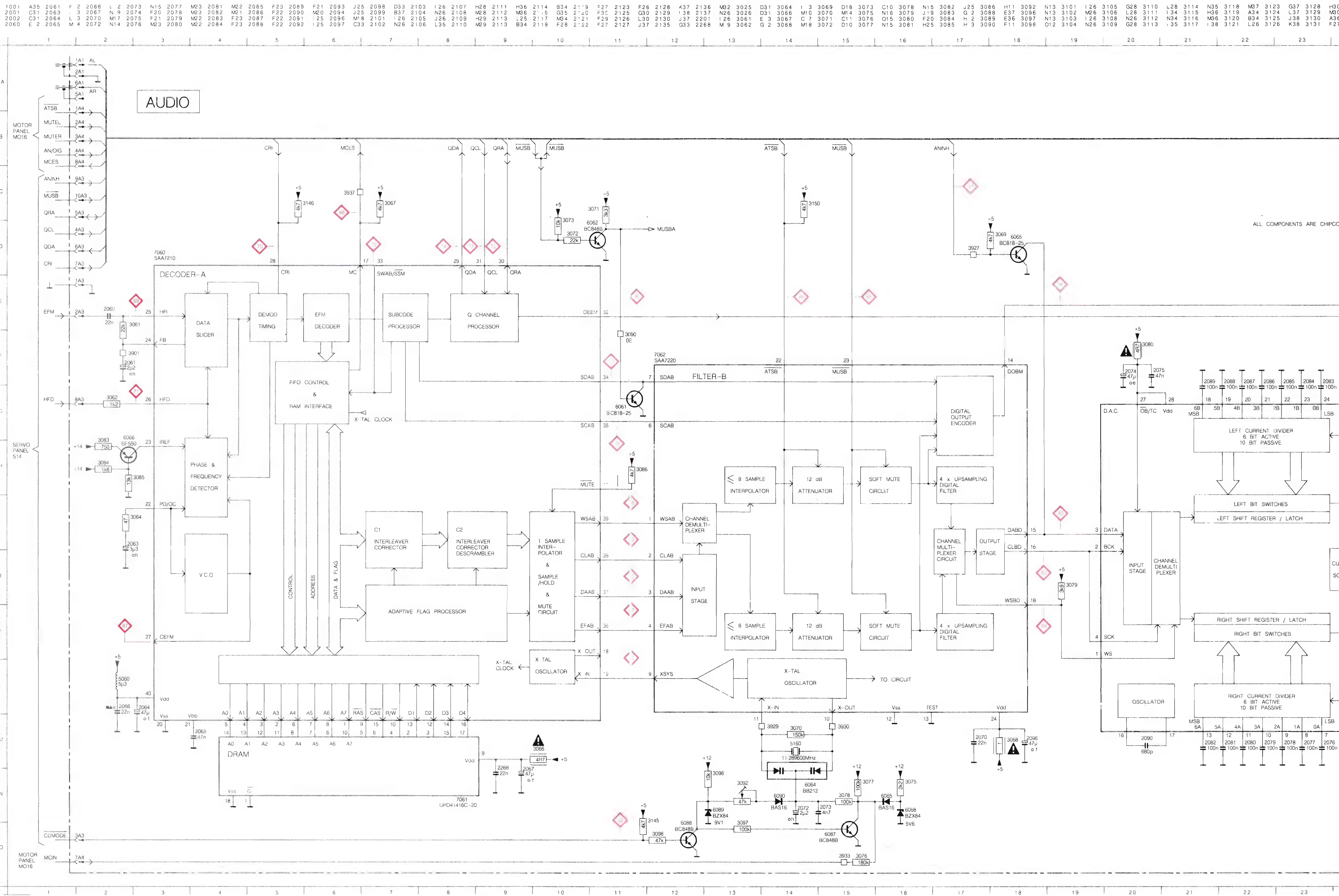
PRINT LAY-OUT CHIP-SIDE WITH LARGE SUB. PANEL



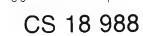


CIRCUIT DIAGRAM WITH LARGE SUB. PANEL

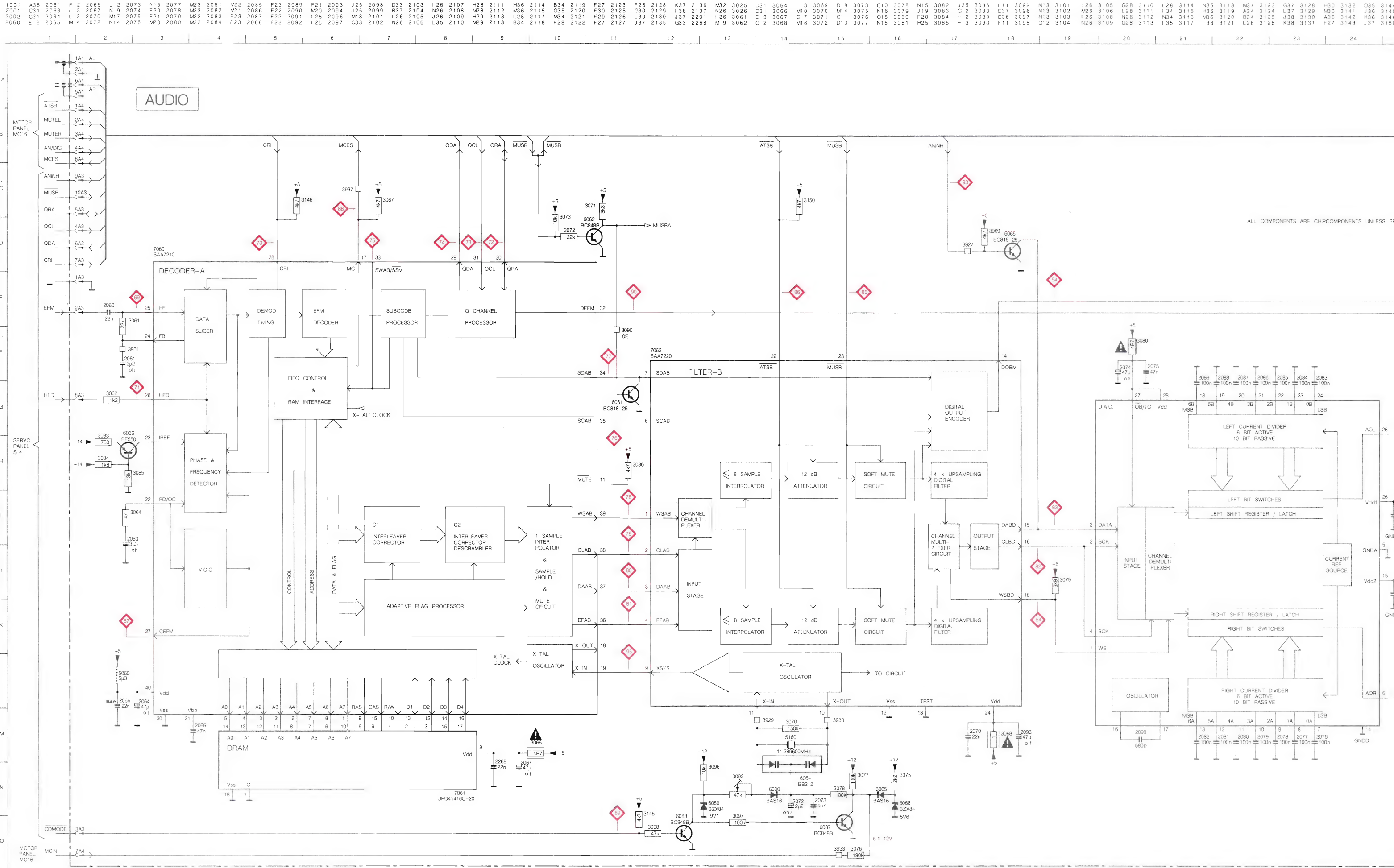
10-9 10-9



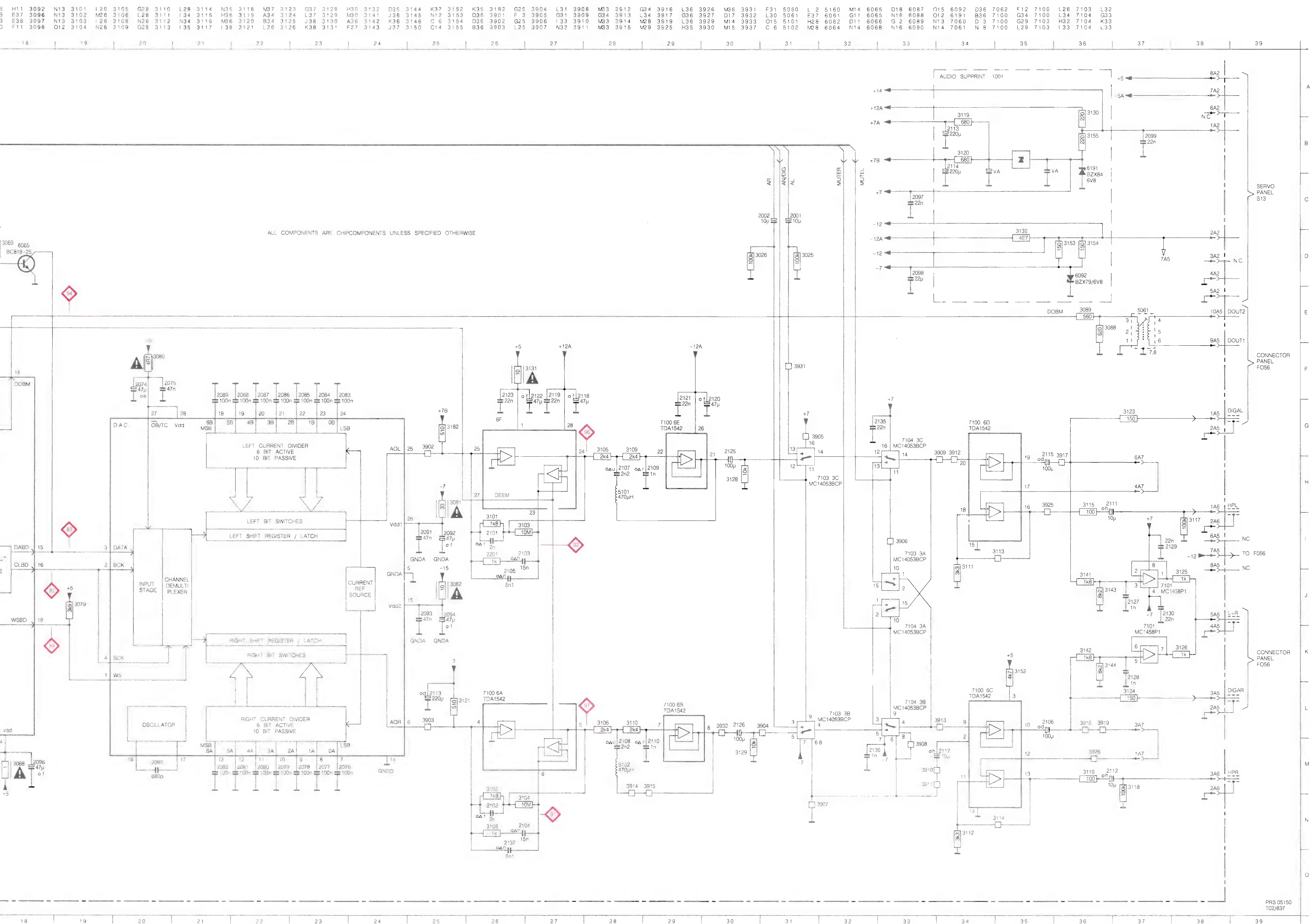








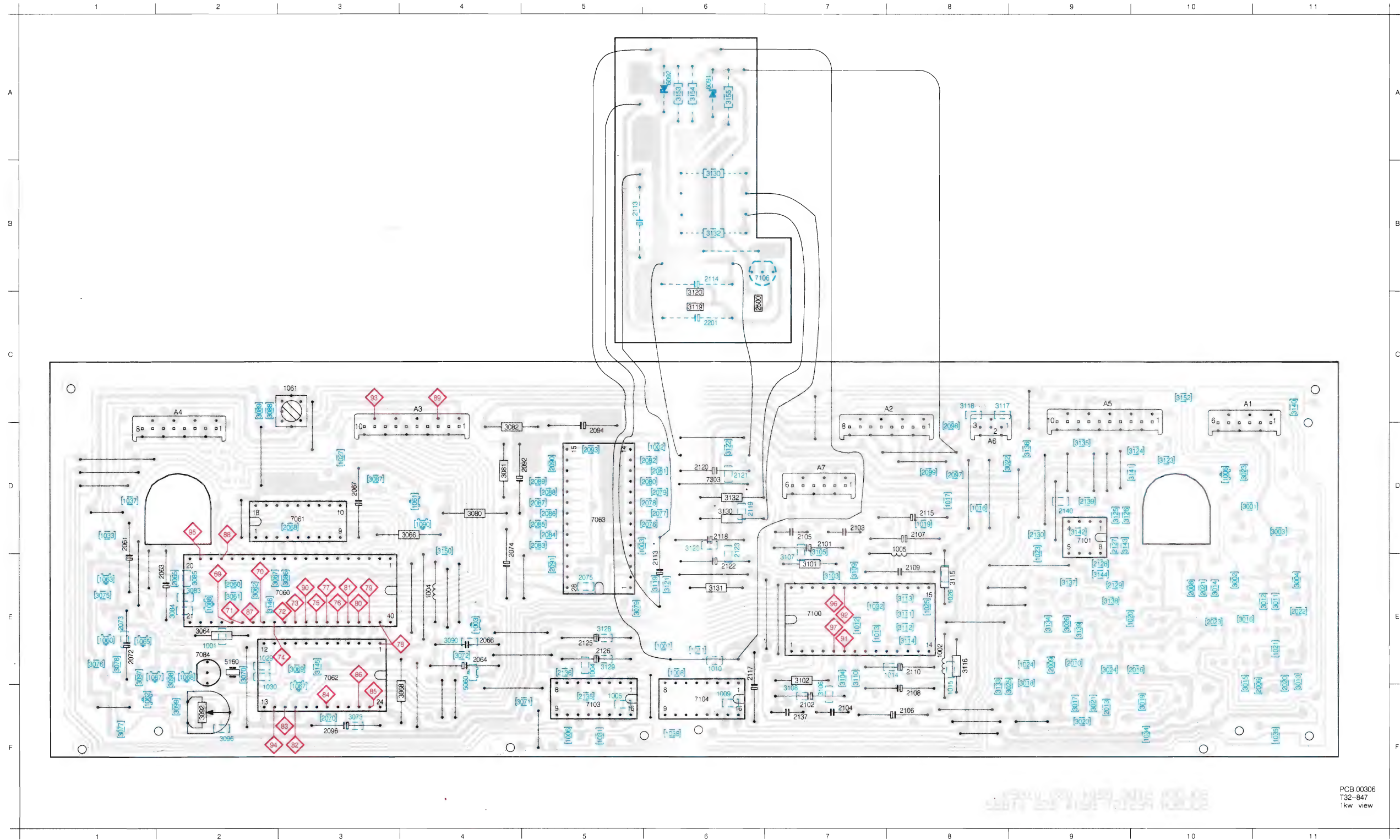






PRINT LAY-OUT COMP-SIDE CDV988

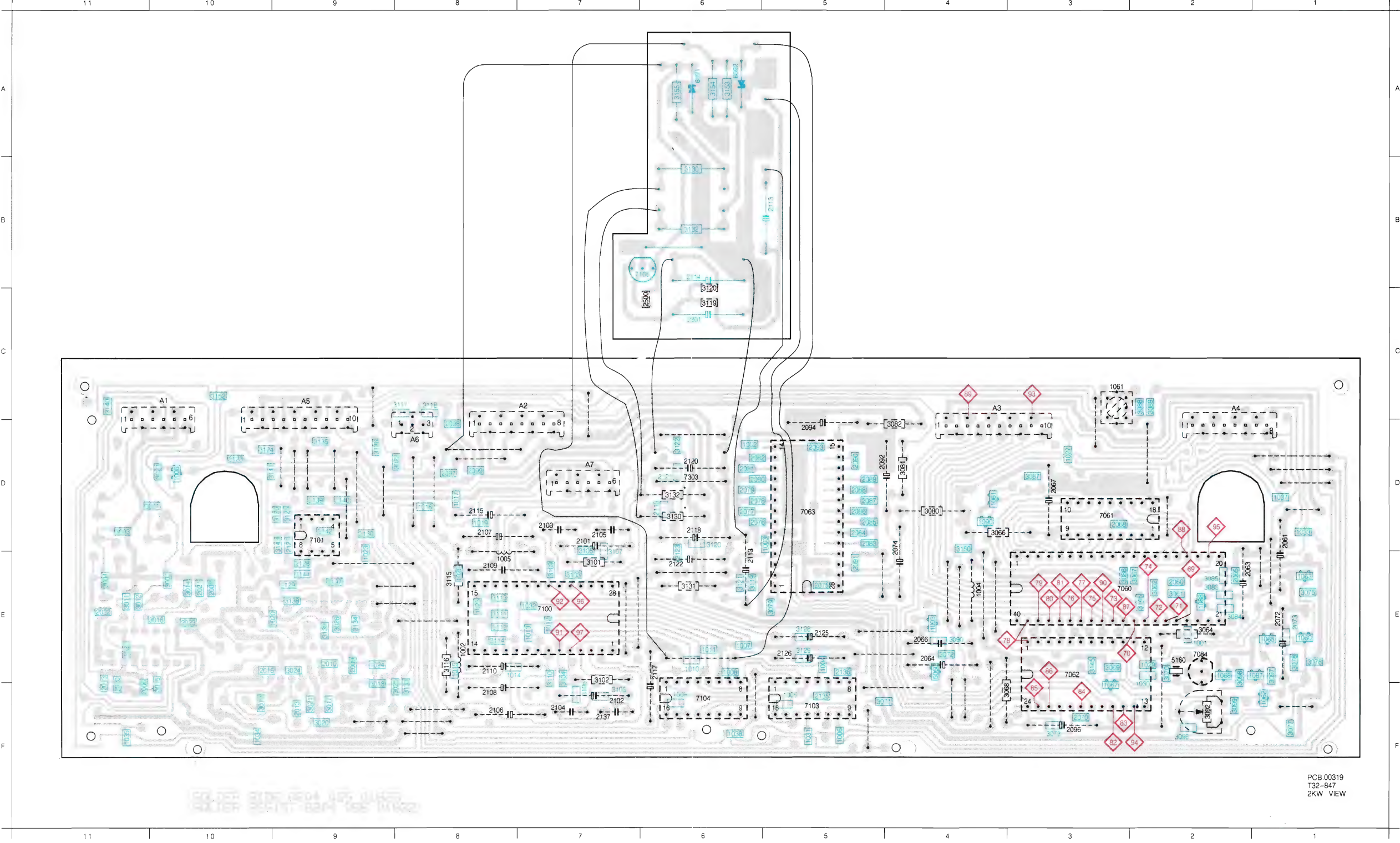
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1002 D 6	1007 E 6	1017 D 8	1030 F 2	1061 C 3	2008 E10	2061 D 1	2074 D 4	2084 D 5	2094 D 5	2106 F 8	2118 D 5	2129 D 6	3002 E10	3018 E 9	3062 E 2	3075 E 1	3085 E 2	3099 E 2	3110 E 7	3119 C 6	3129 E 5	3137 E 9	3150 D 4	7061 D 3	
1002 E 8	1008 E 6	1019 D 8	1031 F 5	1062 F 1	2009 E 9	2063 E 2	2075 E 5	2085 D 5	2096 F 3	2107 D 8	2119 D 6	2130 D 6	3003 D11	3019 F10	3064 E 2	3076 E 1	3086 E 3	3101 E 7	3111 E 8	3120 D 6	3130 D 6	3138 E 9	3152 C10	7062 F 3	
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1004 E 5	1011 E 6	1023 D 9	1034 F10	1067 F 3	2016 E10	2066 E 4	2078 D 6	2088 D 5	2099 D 8	2110 E 8	2122 E 6	2137 F 7	3012 E11	3022 D 8	3068 F 4	3079 E 5	3089 C 2	3104 E 7	3114 E 8	3122 D 6	3132 D 6	3141 D10	3155 A 6	7100 E 7	
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1005 D 9	1014 E 8	1026 E 8	1038 F 6	1088 E 2	2022 E11	2070 F 3	2081 D 6	2091 E 5	2103 D 7	2114 B 6	2125 E 5	2201 C 6	3015 E10	3025 E 9	3071 F 6	3082 D 4	3096 F 2	3107 E 7	3117 C 8	3125 D 9	3134 E 9	3144 E 9	6091 A 6	7104 F 6	
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PRINT LAY-OUT CHIP-SIDE CDV988

1001 E 2	1006 D10	1016 D 8	1029 E 2	1061 D 4	2006 F11	2060 E 2	2073 E 1	2083 D 5	2093 D 5	2105 D 7	2117 E 6	2128 E 9	3001 D11	3017 F 9	3061 E 2	3073 F 3	3084 E 2	3098 E 2	3109 E 7	3119 E 6	3128 E 5	3136 D 9	3146 E 2	7060 E 3	7303 D 6
1002 D 6	1007 E 6	1017 D 8	1030 F 3	1061 C 3	2008 E10	2061 D 1	2074 D 4	2084 D 5	2094 D 5	2106 F 8	2119 D 6	2129 E10	3002 E10	3018 F 9	3062 E 2	3076 E 1	3085 E 2	3099 F 2	3110 E 7	3119 D 6	3129 E 5	3137 E 9	3150 D 4	7061 D 3	
1002 D 8	1008 E 6	1019 D 8	1031 F 3	1062 F 1	2009 E 9	2063 E 1	2075 E 5	2085 D 5	2096 F 3	2107 D 8	2119 D 6	2130 D 9	3003 D11	3019 F10	3064 E 2	3076 E 1	3086 E 3	3101 E 7	3111 E 8	3120 D 6	3130 D 6	3138 E 9	3152 C10	7062 E 3	
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SERVO MAIN BLOCK DIAGRAM

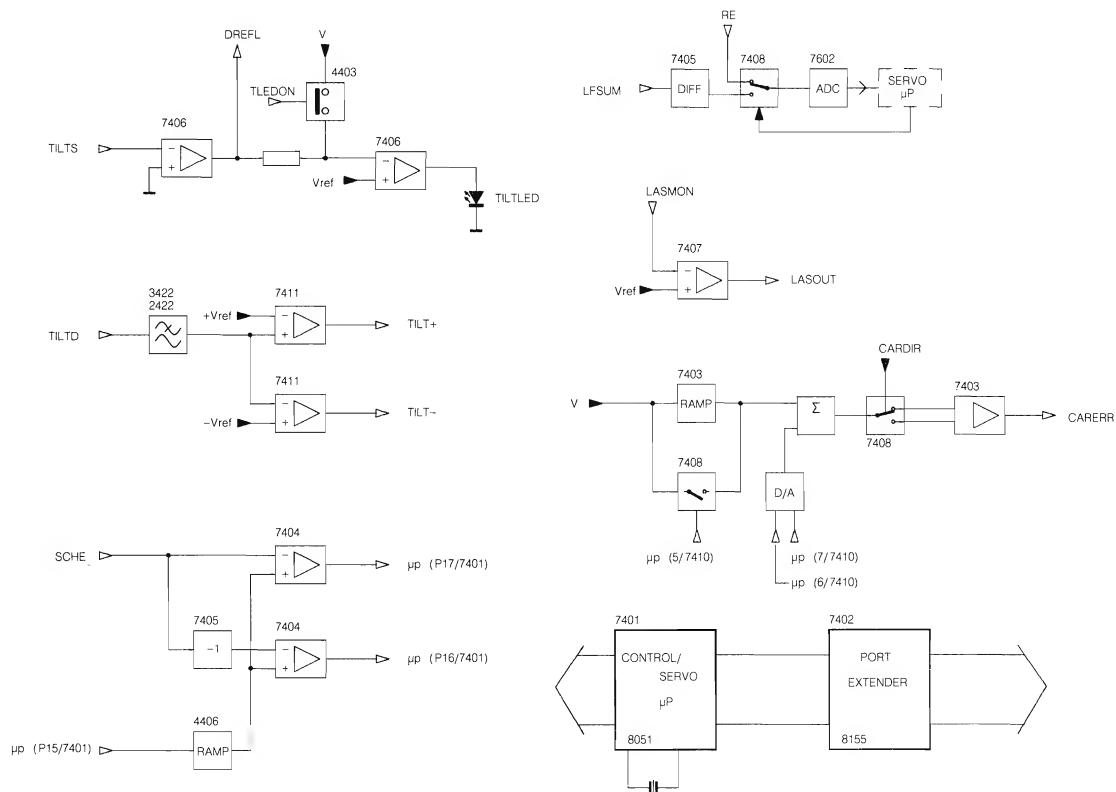






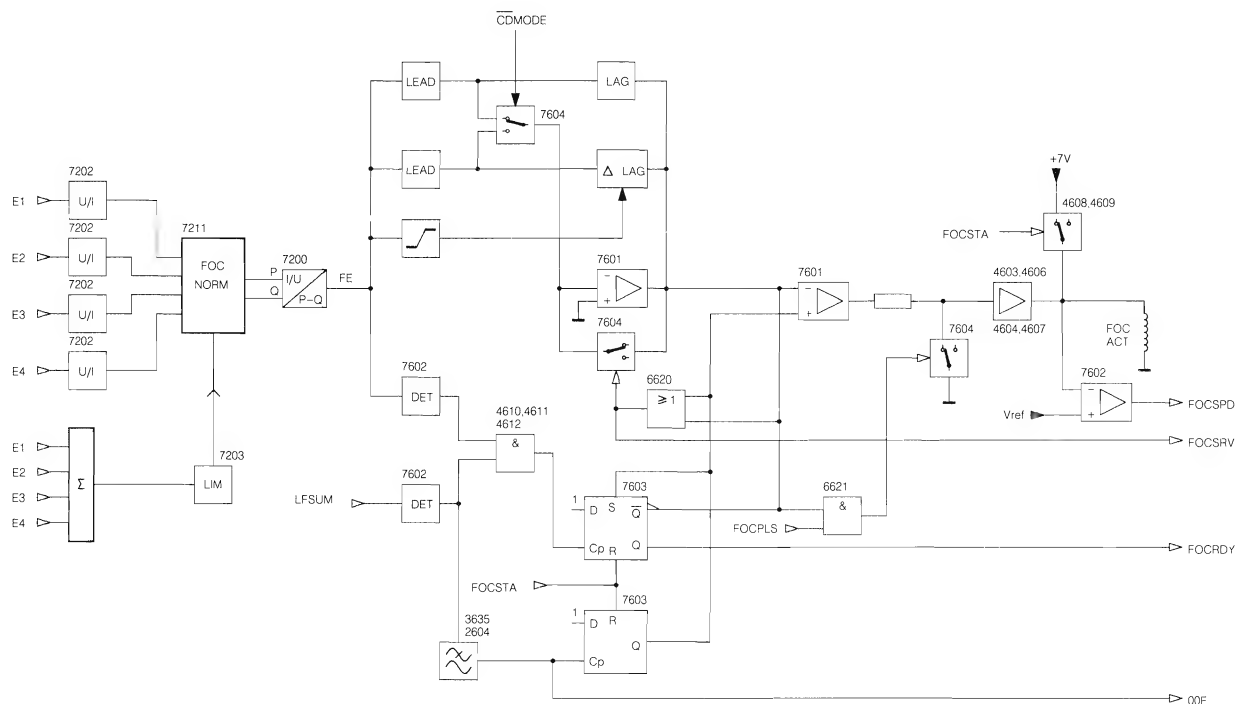


SERVO 3 BLOCKDIAGRAM



PRS 03233  
T02/810

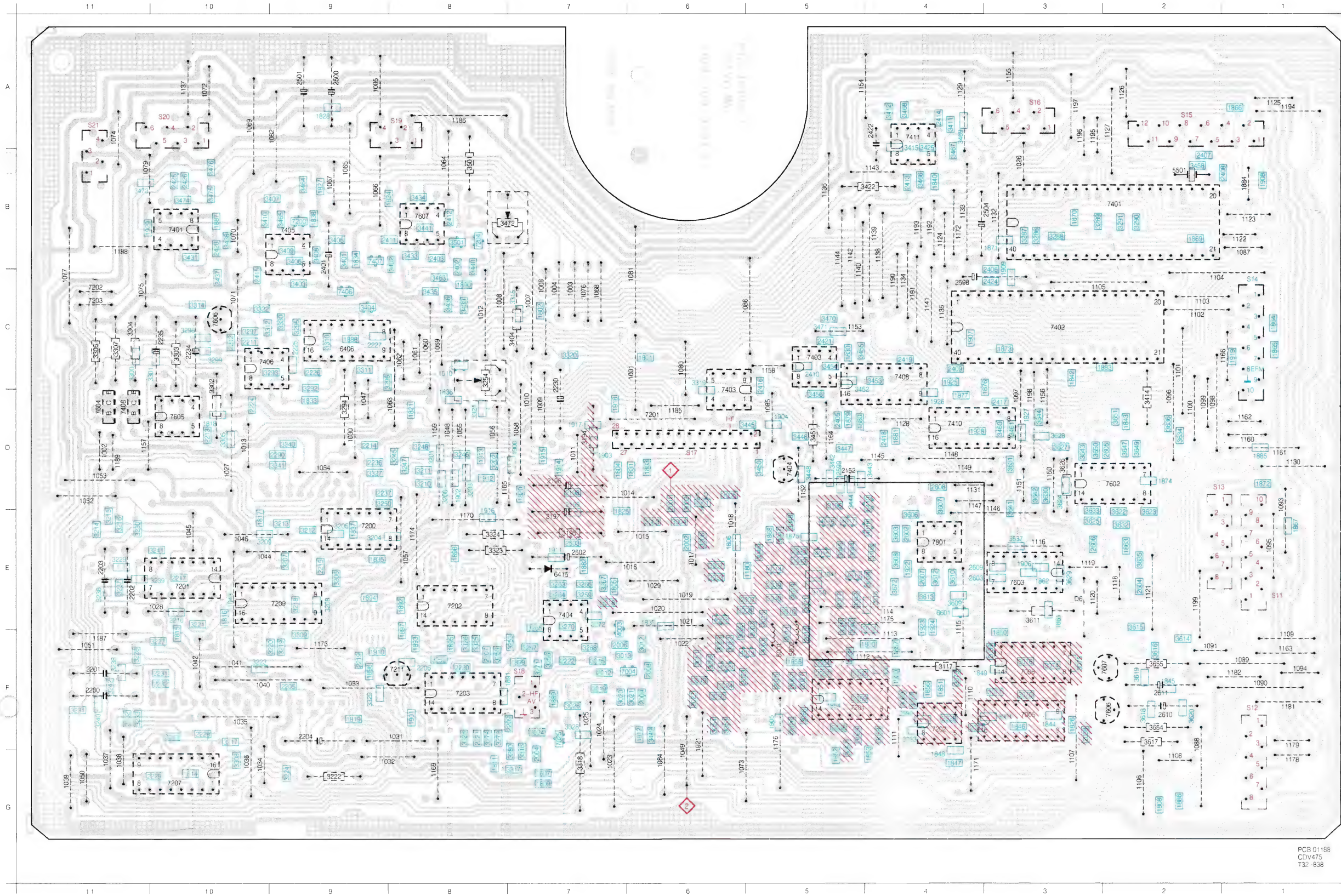
SERVO 4 BLOCKDIAGRAM



PRS 03235  
T02/811








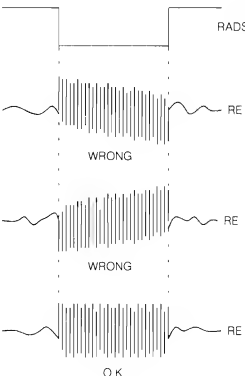


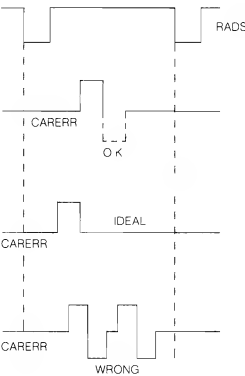
PRINT LAY-OUT SERVO I



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1004	C 7	1135	C 4	1879	D 5	2410	C 5
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1006	C 7	1137	A10	1881	D 4	2412	B 8
1007	C 7	1138	B 4	1882	E 7	2413	B 4
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1018	E 6	1149	D 4	1893	F 8	2424	B10
1019	E 6	1150	D 3	1894	F 8	2425	B10
1020	E 6	1151	D 3	1895	F 8	2501	A 9
1021	E 6	1152	D 5	1896	F 9	2502	E 7
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1023	F 7	1154	A 5	1898	E 8	2504	B 3
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1035	F10	1166	C 1	1910	F 9	2611	F 2
1036	G10	1167	G 8	1911	E 7	2999	F 4
1037	G11	1168	E 8	1912	D 8	3001	F 3
1038	G11	1169	C 4	1913	D 8	3002	D 6
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1073	G 6	1810	G 8	2021	F 6	3052	F 6
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1080	C 6	1817	D10	2028	F 4	3059	F 5
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1125	A 1	1862	E 1	2125	C10	3214	E 9
1126	A 1	1863	E 1	2126	C10	3215	E 9
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1131	A 1	1868	E 1	2131	C10	3220	F10
1132	A 1	1869	E 1	2132	C10	3221	F10
1133	A 1	1870	E 1	2133	C10	3222	F10
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1162	A 1	1899	E 1	2162	C10	3251	F10
1163	A 1	1900	E 1	2163	C10	3252	F10
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1165	A 1	1902	E 1	2165	C10	3254	F10
1166	A 1	1903	E 1	2166	C10	3255	F10
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1168	A 1	1905	E 1	2168	C10	3257	F10
1169	A 1	1906	E 1	2169	C10	3258	F10
1170	A 1	1907	E 1	2170	C10	3259	F10
1171	A 1	1908	E 1	2171	C10	3260	F10
1172	A 1	1909	E 1	2172	C10	3261	F10
1173	A 1	1910	E 1	2173	C10	3262	F10
1174	A 1	1911	E 1	2174	C10	3263	F10
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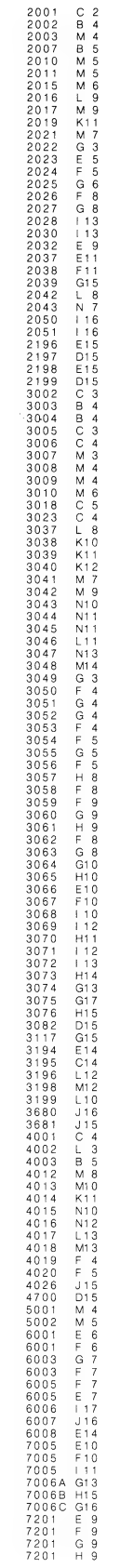


RE ADJUSTMENT

STEP	SIGNAL	MODE					REMARKS
1	—	STANDBY		R3254			PUT R3254 IN THE MID-POSITION
2	—	STANDBY		R3472			
3	RE	STILL PIC. VIDEO TESTDISC CHAPTER 25	PIN 1 OF IC7201 ON SERVO 2			TRIGGER ON  RADSRV	
4		PRESS FWD SCAN		R3254			SIGNALS DURING FWD SCAN (STILL PIC.)
5	CARERR	PRESS FWD SCAN	  ON SERVO 3	R3272			SIGNALS DURING FWD SCAN (STILL PIC.)

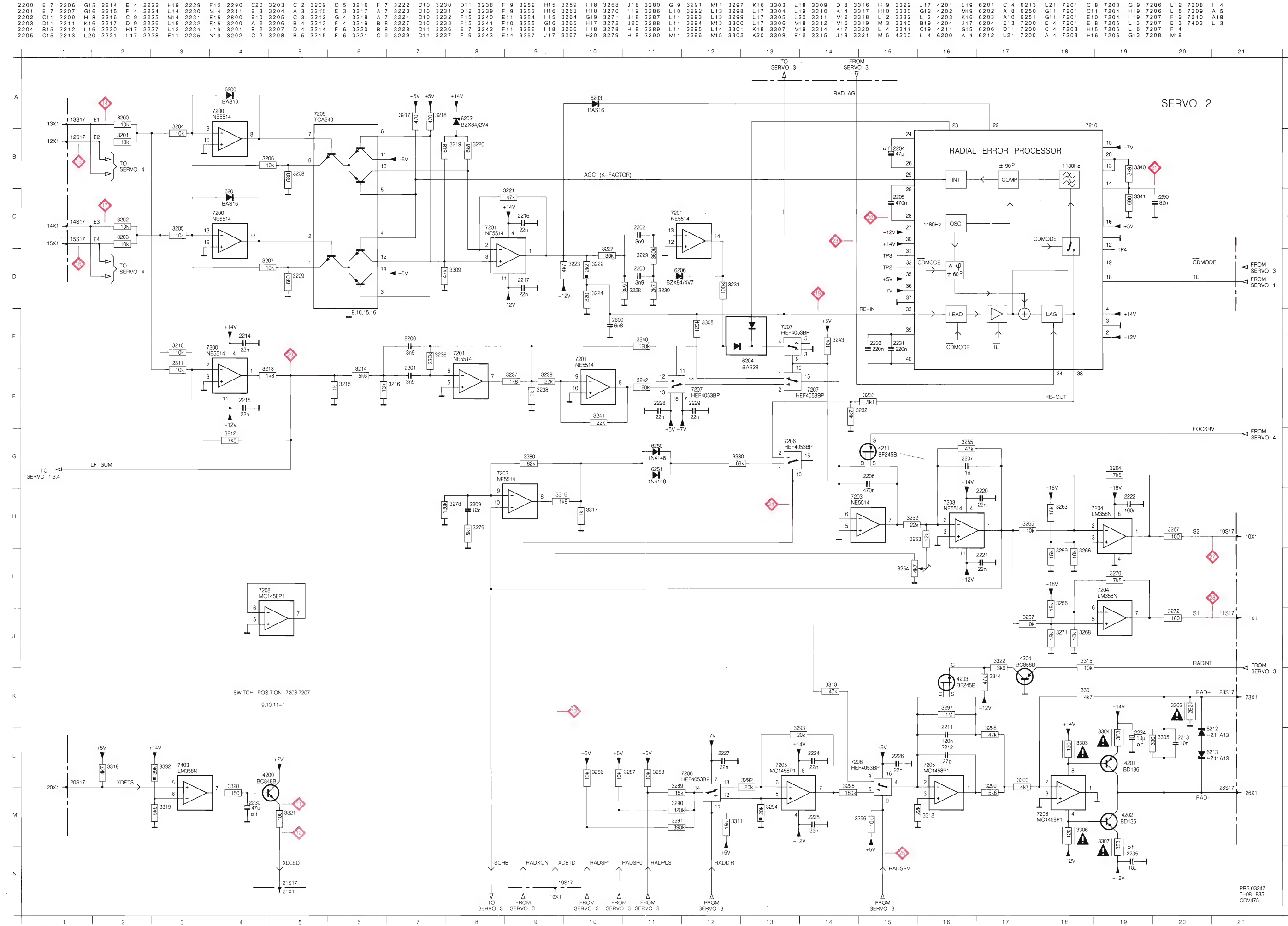
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3228 F11	3296 C 9	3412 A 4	3501 B 8	4013 E 5	7602 D 2
3229 E11	3297 C10	3414 D 2	3603 E 4	4014 E 5	7603 E 3
3230 E11	3298 C10	3415 A 4	3606 E 4	4015 E 5	7604 D11
3231 F11	3299 C10	3422 B 4	3607 D 4	4016 E 5	7605 D10
3232 F11	3300 C11	3425 A 4	3608 E 4	4017 E 5	7606 F 2
3233 F11	3301 C11	3431 B10	3609 E 4	4018 E 4	7606 C10
3236 E11	3302 C10	3433 B 8	3610 E 4	4019 F 6	7607 B 8
3237 E11	3303 C10	3434 B 8	3611 E 3	4020 F 6	7607 F 2
3238 F11	3304 C11	3435 C 8	3612 E 4	5001 F 5	7801 E 4
3239 E10	3305 D10	3436 C 8	3613 E 4	5002 F 5	
3240 F11	3306 C11	3437 C10	3614 F 2	5501 B 2	
3241 E10	3307 C11	3438 B10	3615 E 2	6406 C 9	
3242 F11	3308 G10	3439 C 8	3616 F 2	6410 D 4	
3243 F10	3309 F 9	3440 B 8	3617 F 2	6415 E 7	
3245 D 8	3310 C 9	3441 B 8	3618 F 2	6601 E 4	
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3247 D 8	3312 C10	3443 D 4	3620 F 2	7006 F 3	
3248 D 8	3314 C10	3444 D 5	3622 E 2	7012 E 4	
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3254 C 8	3318 G 7	3448 D 5	3626 D 3	7201 F 5	
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3256 F 7	3320 C 7	3450 D 5	3628 D 3	7201 E10	
3257 F 7	3321 D 8	3451 D 5	3629 E 3	7202 F 4	
3259 E 7	3322 C10	3452 C 5	3630 D 3	7202 C11	
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3264 E 7	3324 E 8	3454 C 5	3632 E 2	7203 C11	
3265 E 7	3325 F 8	3455 C 5	3633 E 3	7203 F 8	
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3267 E 7	3327 D 9	3458 B 2	3635 E 2	7207 G10	
3268 F 7	3328 F 8	3460 D 3	3636 D 2	7209 E 9	
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3286 B 3	3403 C 9	3468 A 4	3649 D 2	7404 E 7	
3297 B 3	3404 C 9	3469 A 4	3650 D 3	7404 D 5	
3288 B 3	3404 C 7	3470 C 5	3651 D 2	7405 B 9	
3289 B 3	3405 B 9	3471 C 5	3654 F 2	7406 C 9	
3290 B 2	3406 B 9	3472 B 8	3655 F 2	7406 C10	
3291 B 2	3407 B10	3473 B11	3672 E 4	7407 B 9	
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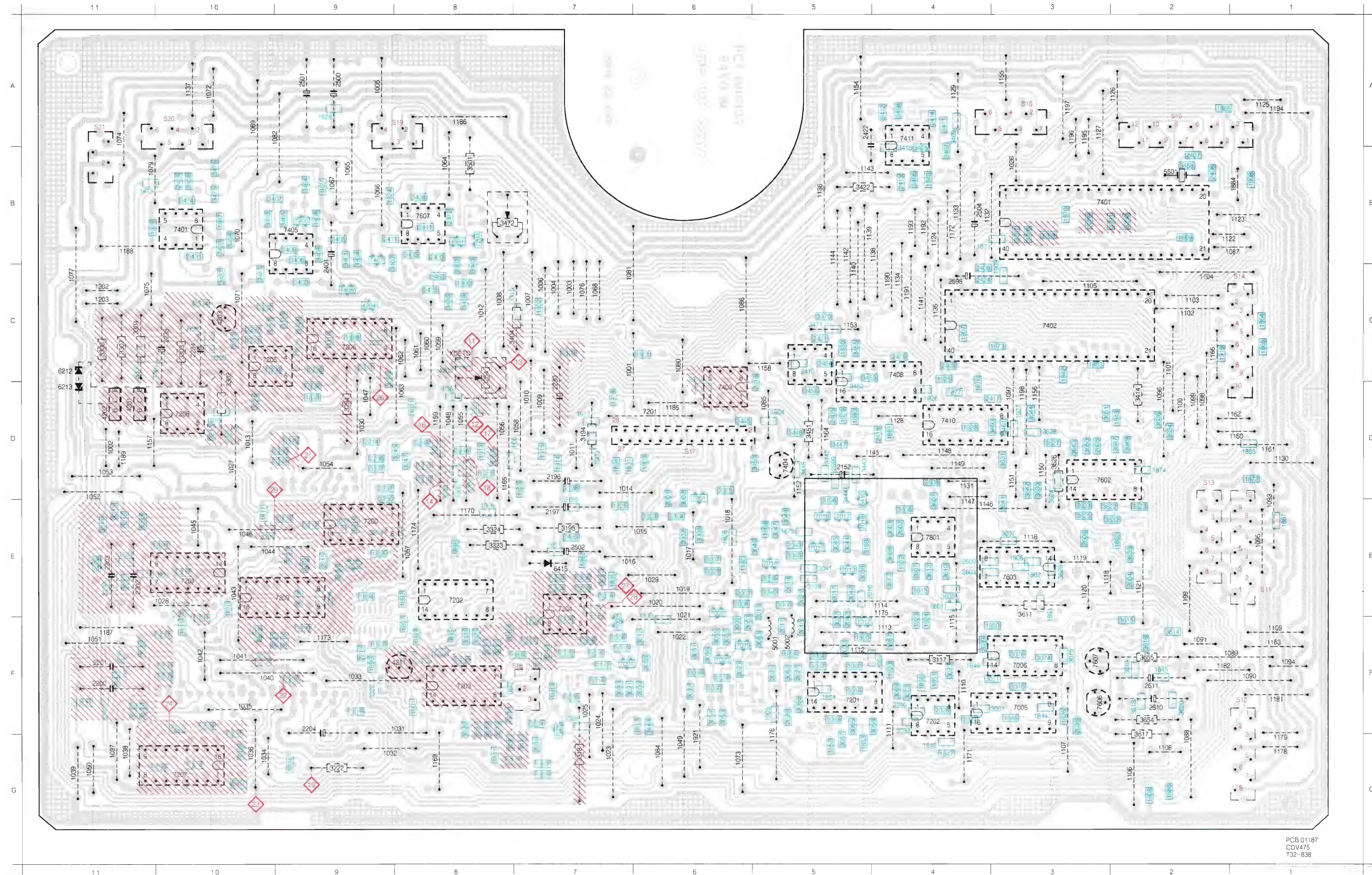


CIRCUIT DIAGRAM SERVO II





PRINT LAY-OUT SERVO II



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1002	D 11	1115	F 4	1835	E 9	2026	F
1003	C 7	1116	E 3	1836	D 8	2027	F
1004	C 7	1118	E 2	1837	E 9	2028	F
1005	A 9	1119	E 3	1838	B 9	2032	C
1006	C 7	1120	E 3	1839	E 7	2033	F
1007	C 7	1121	E 2	1840	B 4	2037	F
1008	C 8	1122	B 2	1842	C 3	2038	F
1009	D 7	1123	B 2	1843	D 2	2039	F
1010	D 7	1124	B 4	1844	F 3	2042	F
1011	D 7	1125	A 1	1845	F 2	2043	F
1012	C 8	1126	A 2	1846	F 3	2152	D
1013	D 10	1127	A 3	1847	G 4	2196	D
1014	D 7	1128	D 4	1848	G 4	2197	E
1015	E 7	1129	A 4	1849	F 4	2198	D
1016	E 7	1130	D 1	1850	F 4	2199	E
1017	E 6	1131	D 4	1851	F 4	2200	F
1018	E 6	1132	B 3	1852	G 5	2201	F
1019	E 6	1133	B 4	1853	G 5	2202	E
1020	E 6	1134	C 4	1854	F 5	2203	E
1021	E 6	1135	C 4	1855	F 5	2204	F
1022	F 6	1136	B 5	1856	F 4	2205	F
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1024	F 7	1138	B 4	1858	F 4	2207	F
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1035	F 10	1149	D 4	1872	C 1	2221	F
1036	G 10	1150	D 3	1873	C 4	2222	F
1037	G 11	1151	D 3	1874	D 2	2224	D
1038	G 11	1152	D 5	1875	E 5	2225	C
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1040	F 10	1154	A 5	1877	D 4	2227	C
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1042	F 10	1156	D 3	1880	D 5	2229	C
1043	E 10	1157	D 11	1881	D 5	2230	C
1044	E 10	1158	C 6	1882	E 7	2231	F
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1060	C 8	1176	F 5	1898	E 8	2411	B
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1062	C 8	1179	G 1	1900	D 7	2413	B
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1070	B 10	1189	D 11	1908	B 1	2421	C
1071	C 10	1190	C 4	1909	C 3	2422	A
1072	A 10	1191	C 4	1910	F 9	2424	C
1073	G 6	1192	B 4	1911	E 7	2425	B
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1077	C 11	1196	A 3	1915	D 7	2502	E
1078	B 10	1197	A 3	1916	E 8	2503	E
1079	B 10	1198	D 3	1917	D 7	2504	B
1080	C 6	1198	D 3	1918	D 7	2508	C
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1082	A 9	1202	C 11	1919	C 2	2599	D
1084	G 6	1203	C 11	1920	F 4	2602	E
1085	D 5	1800	F 5	1921	G 6	2603	E
1086	C 6	1801	C 7	1922	E 4	2604	E
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1091	F 2	1806	E 6	1927	D 3	2609	E
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1103	C 2	1819	F 9	2010	F 5	3008	E
1104	C 2	1820	D 7	2011	F 5	3009	F
1105	C 3	1821	D 8	2012	F 7	3010	E
1106	G 2	1824	B 8	2015	E 5	3012	F
1107	G 9	1825	E 7	2016	E 4	3013	E
1108	G 2	1826	F 3	2017	E 5	3015	F
1109	F 1	1827	B 9	2019	E 5	3018	E
1110	F 4	1828	A 9	2021	E 5	3019	F
1111	F 4	1830	C 5	2022	F 6	3020	F
1112	F 5	1831	D 6	2023	F 6	3021	F
1113	F 5	1833	D 9	2024	F 6	3023	E

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PRINT LAY-OUT SERVO III



SERVO MEASUREMEI	
STEP	SK
1	HI
2	EF
3	FOI
4	X DI
5	E1.E2
6	RE
7	ASC CON
8	RAD
9	LFSI
10	LASEF
11	LASEF
12	C/
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1002 D11	1142 B 5
1003 C 7	1143 B 5
1004 C 7	1144 B 5
1005 A 9	1145 D 5
1006 C 7	1146 D 5
1007 C 7	1147 D 4
1008 C 8	1148 D 4
1009 D 7	1149 D 4
1010 C 8	1150 D 3
1011 D 7	1151 D 3
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1014 D 7	1155 A 3
1015 E 7	1156 D 3
1016 E 7	1157 D11
1017 E 6	1158 C 5
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1021 E 6	1162 D 1
1022 F 6	1163 F 1
1023 G 7	1164 F 1
1024 F 7	1165 D 7
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1031 F 9	1174 E 8
1032 G 9	1175 E 4
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1038 G11	1182 F 2
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1099 D 2	1244 F 2
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1102 C 2	1247 F 2
1103 C 2	1248 F 2
1104 C 2	1249 F 2
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1124 B 4	1269 F 2
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1910 F 9	2618 E 6
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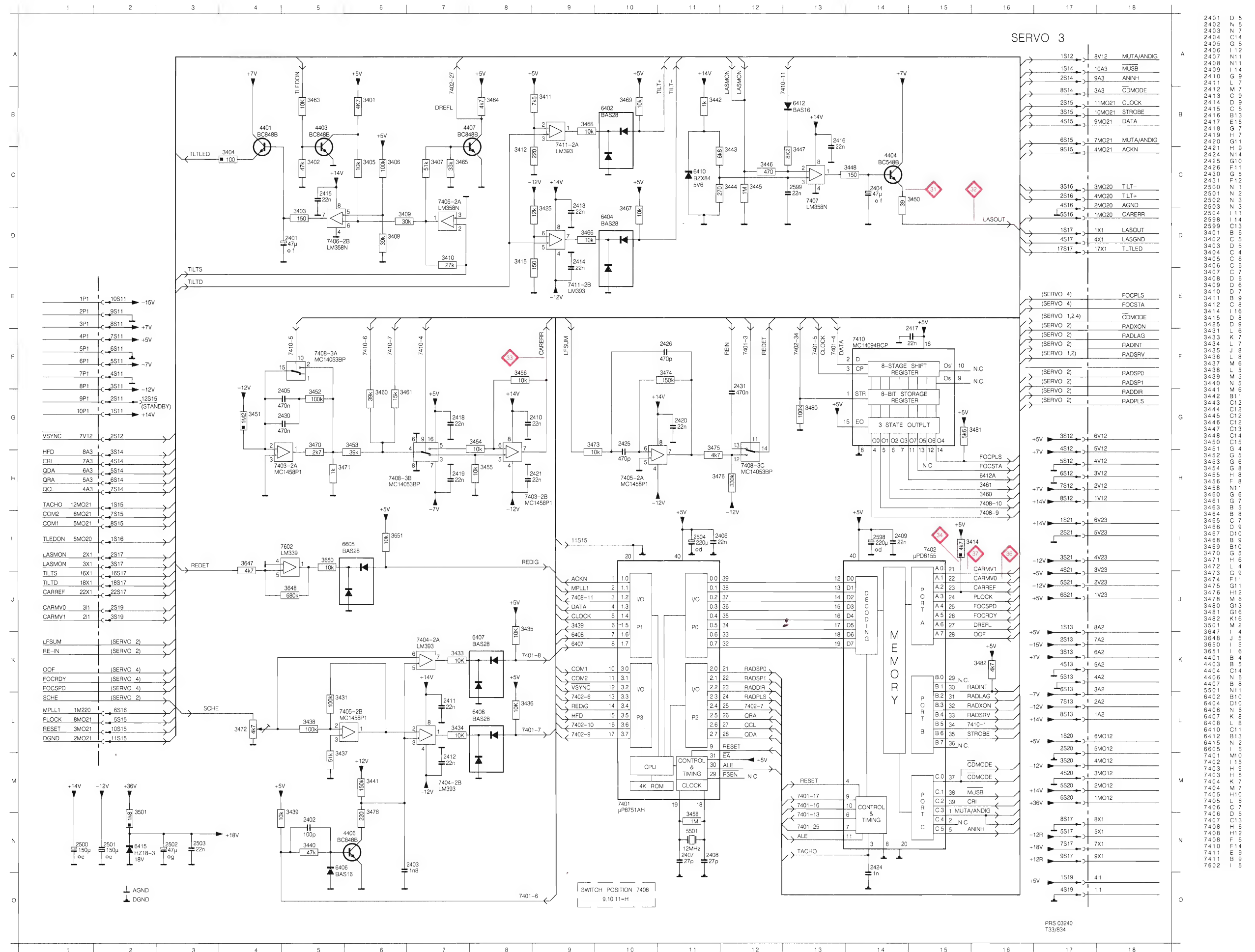


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T05-840

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3270	E	7	3303	C10	3327	D	9	3431	B10	3455	C	5	3606	E	4	3631	D	3	4407	B	9	7025	F	7	7410	D	5	
3271	F	7	3304	C11	3328	F	8	3433	B	3456	D	5	3607	D	4	3632	C	3	4408	F	7	7026	F	7	7411	D	5	
3272	E	7	3305	D10	3329	F	9	3434	B	3458	B	2	3608	E	4	3633	D3	3	5002	F	5	7201	F	5	7602	D	3	
3278	F	8	3306	C11	3330	C	9	3435	C	3460	D	3	3609	E	4	3634	D2	2	6406	C	9	7201	D	6	7603	C	3	
3279	F	8	3307	C11	3340	D10	3436	C	3461	D	3	3610	E	4	3635	E	2	6410	D	4	7201	E10	7	7604	D11	1		
3280	F	7	3308	C10	3341	D10	3437	C	3462	B	3	3611	E	3	3636	D	2	6412	D	5	7202	F	4	7605	D10	1		
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3287	B	3	3310	C	3402	B	8	3439	C	3465	B	9	3613	E	4	3641	D	3	7203	F	2	7203	F	2	7607	F	2	
3288	B	3	3311	C	3403	C	9	3440	B	3466	B	4	3614	F	2	3642	D	3	7001	D	6	7203	F	2	7607	F	2	
3289	B	3	3312	C	3404	C	9	3441	B	3467	A	4	3615	E	2	3643	D	3	7002	E	6	7207	G10	7	7801	E	4	
3290	B	2	3314	C10	3404	C	7	3442	D	3468	A	4	3616	F	2	3644	D	3	7003	F	7	7209	E10	7	7802	F	2	
3291	B	2	3315	C10	3405	C	7	3443	D	3469	A	4	3617	F	2	3647	D	2	7004	F	7	7211	F	9	7803	F	2	
3292	C	9	3316	F	7	406	9	3444	D	3470	C	5	3618	F	2	3648	D	2	7005	F	3	7401	B	3	7804	F	2	
3293	C10	3317	G	8	407	B10	3445	D	3471	C	5	3619	F	2	3649	D	2	7006	F	3	7402	B	3	7805	F	2		
3294	D	9	3318	G	7	408	B	9	3446	D	5	3472	B	8	3620	F	2	7012	E	5	7403	C	5	7806	F	2		
3295	C	9	3319	C	7	409	B10	3447	D	3473	B11	3622	D3	3	3651	D	2	7013	E	5	7404	E	7	7807	F	2		
3296	C	8	3320	C	7	3410	B10	3448	D	3474	B10	3623	D	2	3654	F	2	7014	E	5	7404	B	8	7808	F	2		
3297	C10	3321	C	7	3411	A	4	3449	D	3475	B	3624	D	3	3655	F	2	7015	E	5	7405	B10	7	7809	F	2		
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3299	C10	3323	E	8	3414	D	2	3451	D	3480	C	4	3626	D	3	3401	C	9	7017	F	6	7407	C	6	7811	F	2	
3300	C11																											

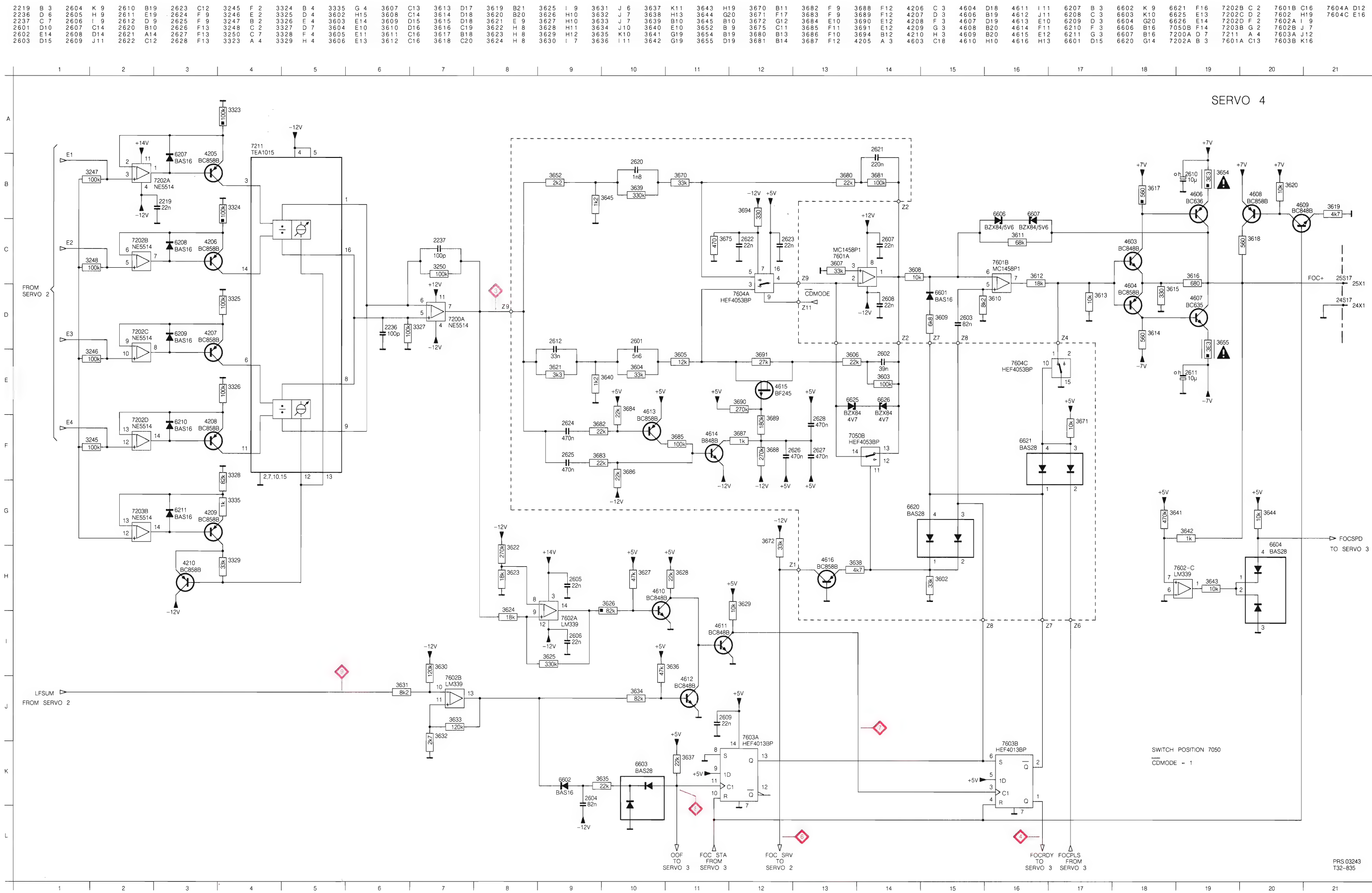


## CIRCUIT DIAGRAM SERVO III



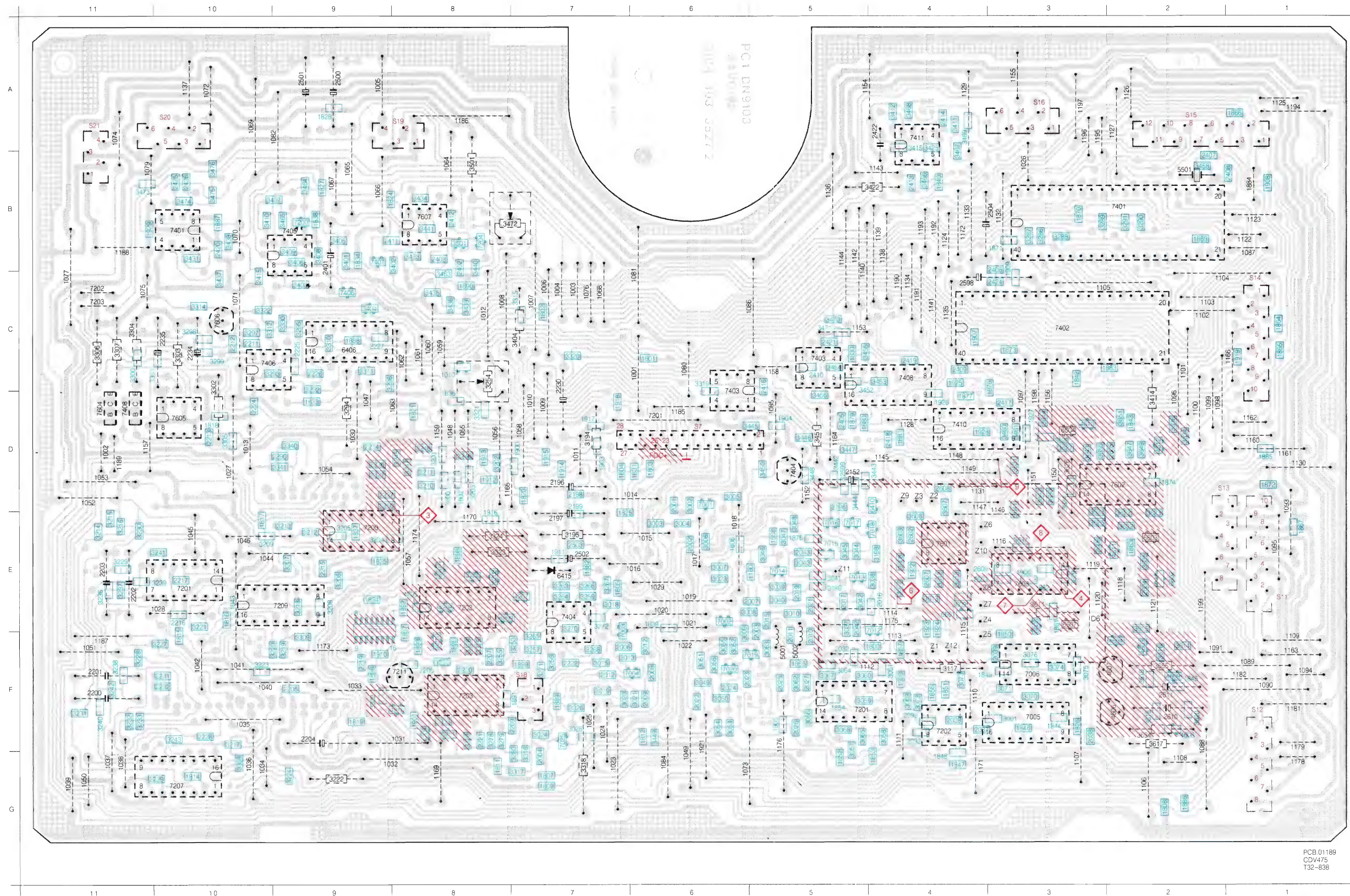


CIRCUIT DIAGRAM SERVO IV





## PRINT LAY-OUT SERVO IV



1001	C 6	1113	F 4	1835	E 9	2026	F 5	3026	F 7	327
1002	D11	1114	E 4	1836	D 8	2027	F 5	3028	F 7	328
1003	C 7	1115	E 4	1837	E 9	2028	F 4	3037	E 5	328
1004	C 7	1116	E 4	1838	B 9	2032	F 5	3038	E 4	328
1005	A 9	1118	E 2	1839	E 6	2033	F 4	3039	E 5	328
1006	C 7	1119	E 3	1840	B 4	2037	F 4	3040	E 5	328
1007	C 7	1120	E 2	1841	C 3	2038	F 3	3041	E 5	328
1008	C 8	1121	E 2	1843	D 2	2039	F 3	3042	E 5	328
1009	D 7	1122	B 1	1844	F 3	2042	E 5	3043	E 5	328
1010	C 8	1123	B 1	1845	F 2	2043	E 5	3044	E 5	328
1011	D 7	1124	B 4	1846	F 3	2152	D 5	3045	E 5	328
1012	C 7	1125	A 1	1847	G 4	2196	D 7	3046	E 5	328
1013	C 8	1126	A 2	1848	F 1	2197	E 7	3047	E 5	328
1014	D 7	1127	D 4	1850	F 4	2199	D 7	3048	E 5	328
1015	E 7	1129	A 4	1851	F 4	2200	F 11	3050	F 6	328
1016	E 7	1130	D 1	1852	G 5	2201	F 11	3051	F 6	328
1017	E 6	1131	D 4	1853	G 4	2202	E 11	3052	F 6	328
1018	E 6	1132	B 4	1854	F 1	2203	E 11	3053	F 6	328
1019	E 6	1133	C 4	1855	F 5	2204	F 9	3054	F 6	328
1020	E 6	1134	C 4	1856	F 4	2205	F 10	3055	F 6	328
1021	E 6	1135	C 4	1857	F 4	2206	F 8	3056	F 6	328
1022	F 6	1136	B 5	1861	F 8	2207	F 8	3057	F 6	328
1023	G 7	1137	A10	1862	C 3	2209	F 7	3058	F 4	328
1024	F 7	1138	B 4	1863	C 2	2211	C 10	3059	F 6	328
1025	F 7	1139	A 2	1864	F 1	2212	C 10	3060	F 6	328
1026	B 3	1140	B 5	1865	C 1	2213	D10	3061	F 4	328
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1031	D 9	1145	B 5	1870	F 3	2219	F 9	3066	F 5	328
1032	G 9	1146	D 4	1871	B 4	2220	F 8	3067	F 5	328
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1036	G10	1150	D 3	1875	C 9	2225	C 9	3071	F 4	328
1037	G11	1151	D 3	1876	F 5	2226	C 9	3072	F 4	328
1038	G11	1152	D 5	1877	D 4	2227	C 9	3073	F 4	328
1039	G11	1153	C 5	1879	D 5	2228	F10	3074	F 3	328
1040	F10	1154	A 4	1880	D 5	2229	G11	3075	F 3	328
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1042	F10	1156	D 3	1882	E 7	2231	F 11	3117	F 4	328
1043	E10	1157	B 5	1883	D 7	2232	C 10	3194	F 7	328
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1046	E10	1160	D 1	1886	G 2	2236	D 9	3198	E 4	328
1047	D 9	1161	D 1	1887	B10	2237	D 9	3199	E 5	328
1048	D 8	1162	D 1	1888	C 9	2280	D10	3200	D 8	328
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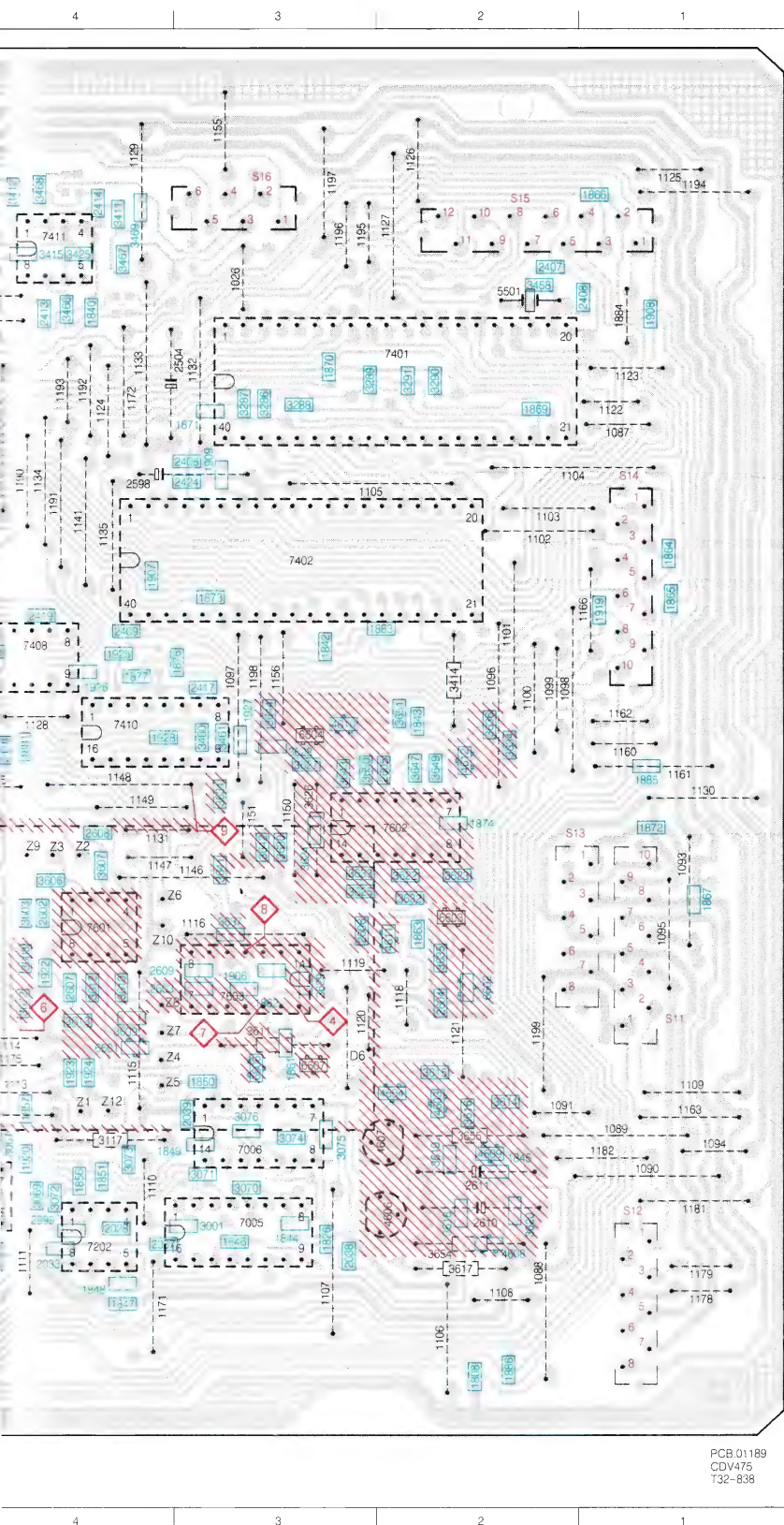
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






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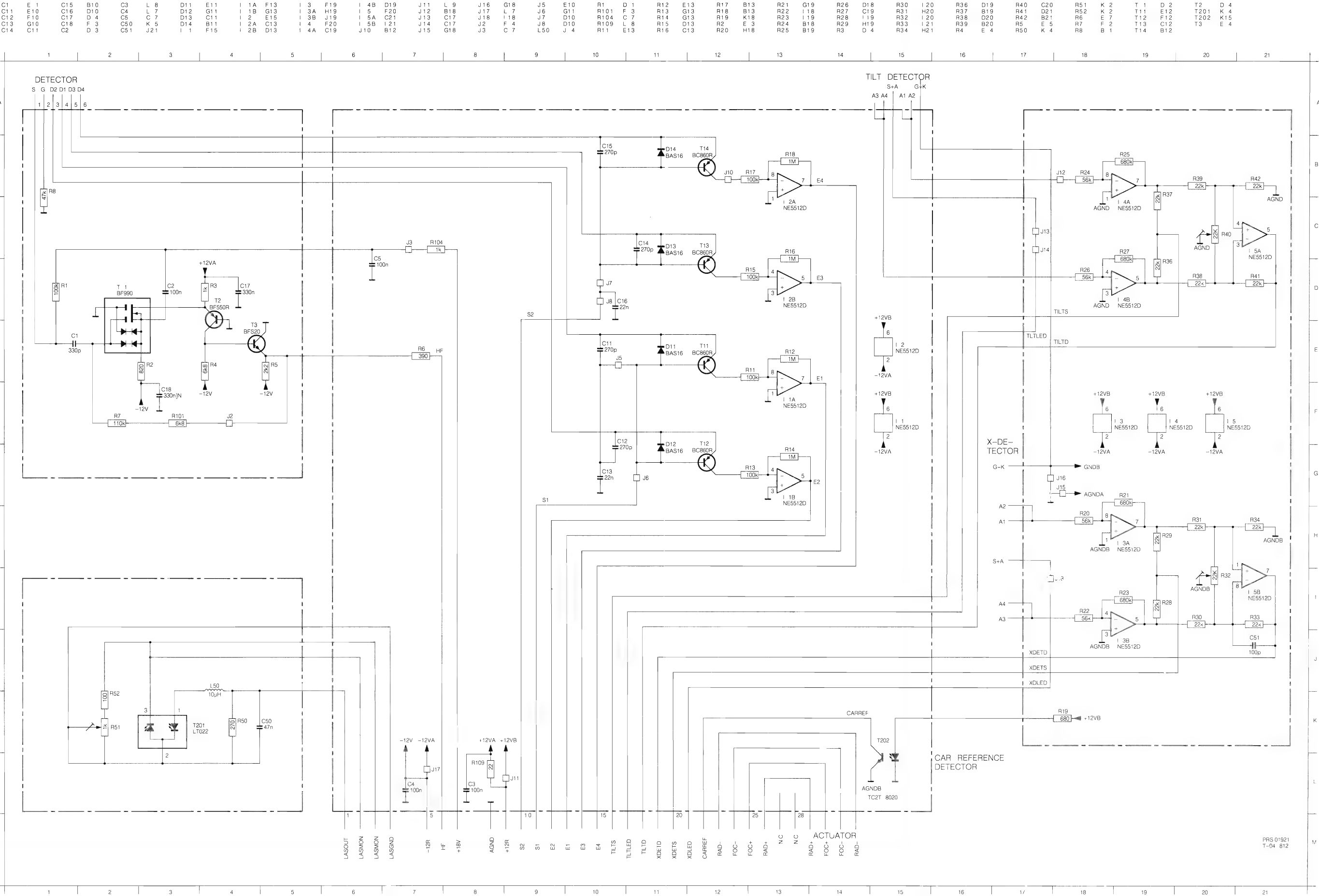
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CIRCUIT DIAGRAM FLEXPRINT





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T32-810

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T02/811





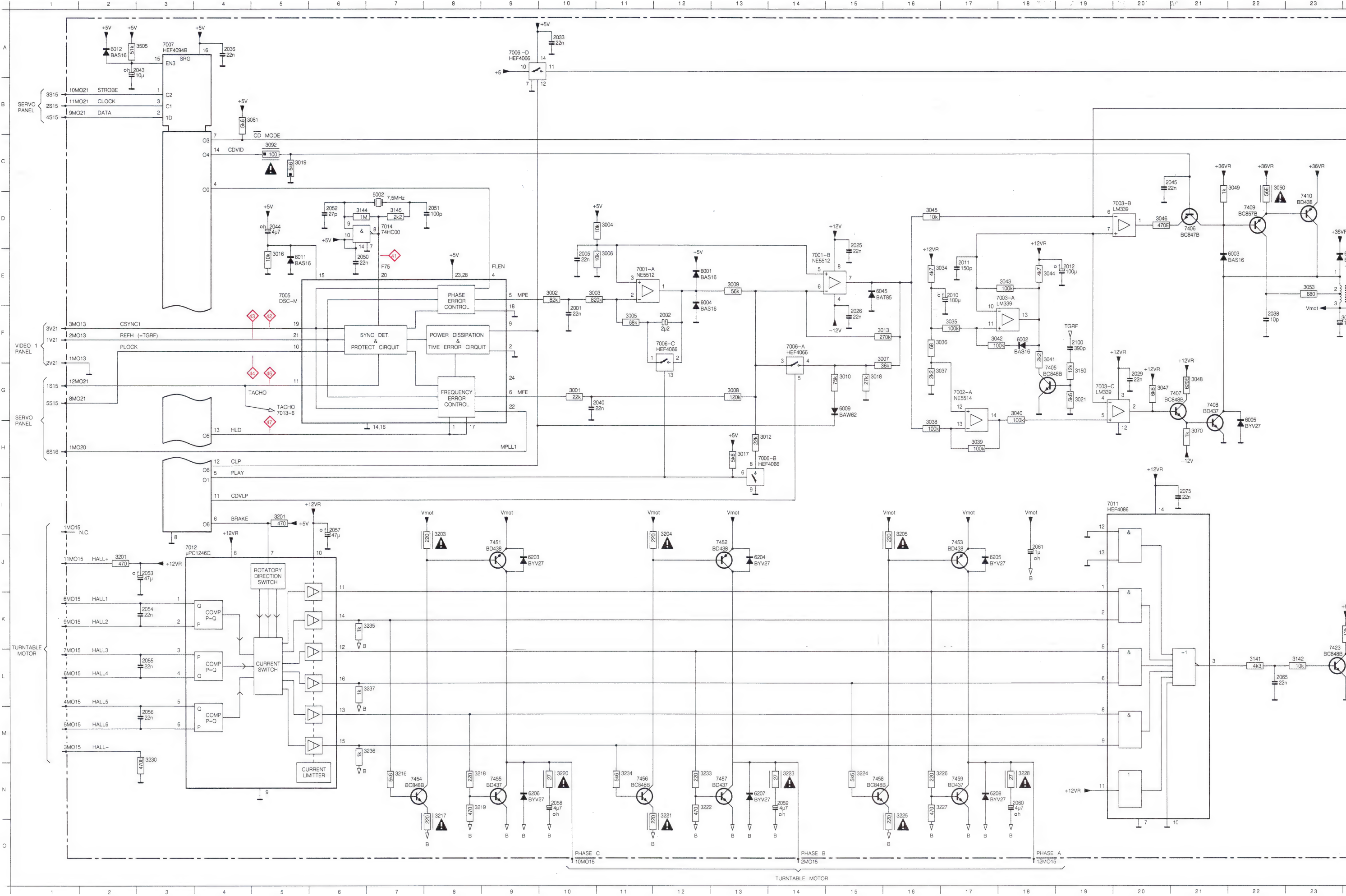
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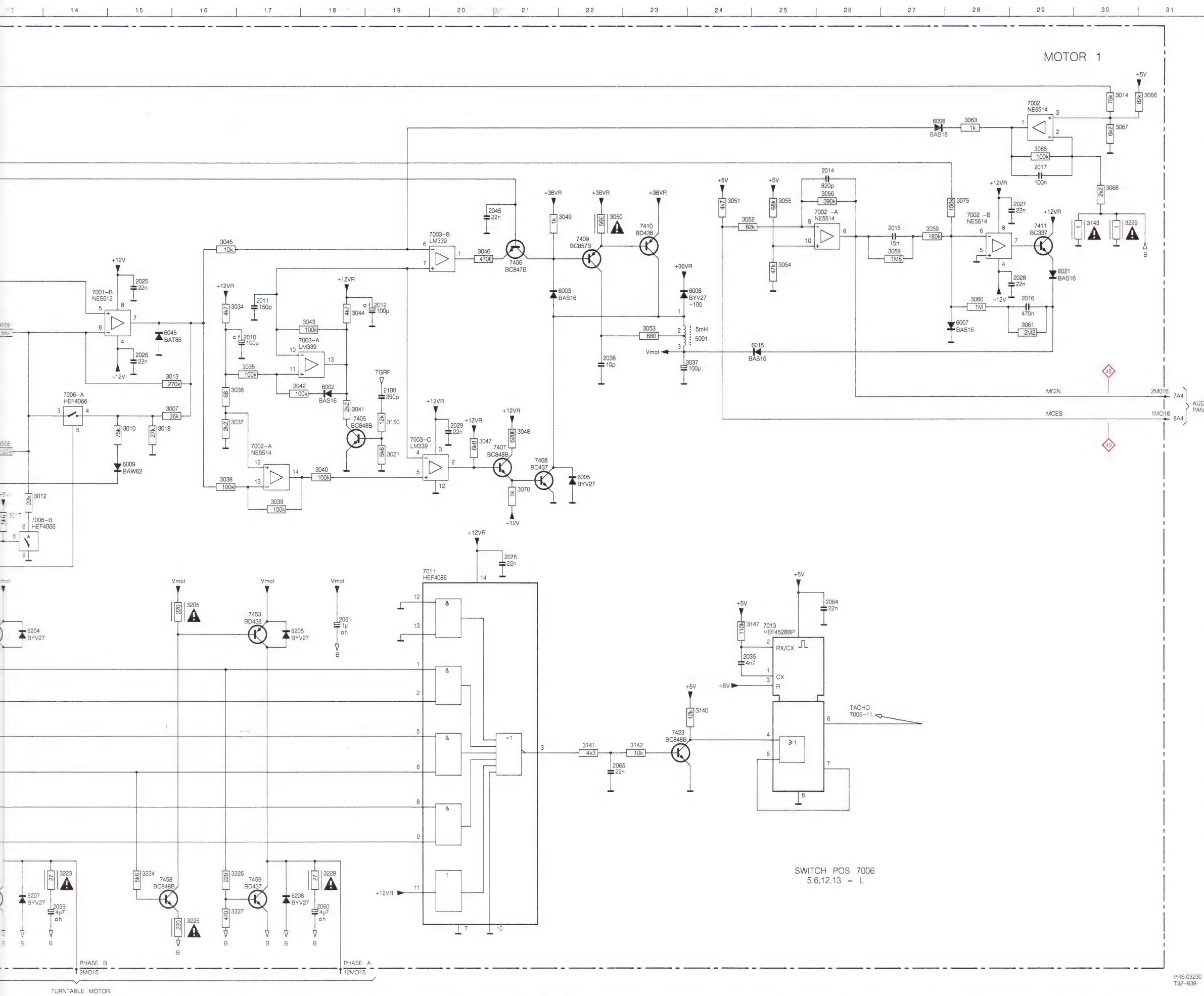




CIRCUIT DIAGRAM MOTOR I





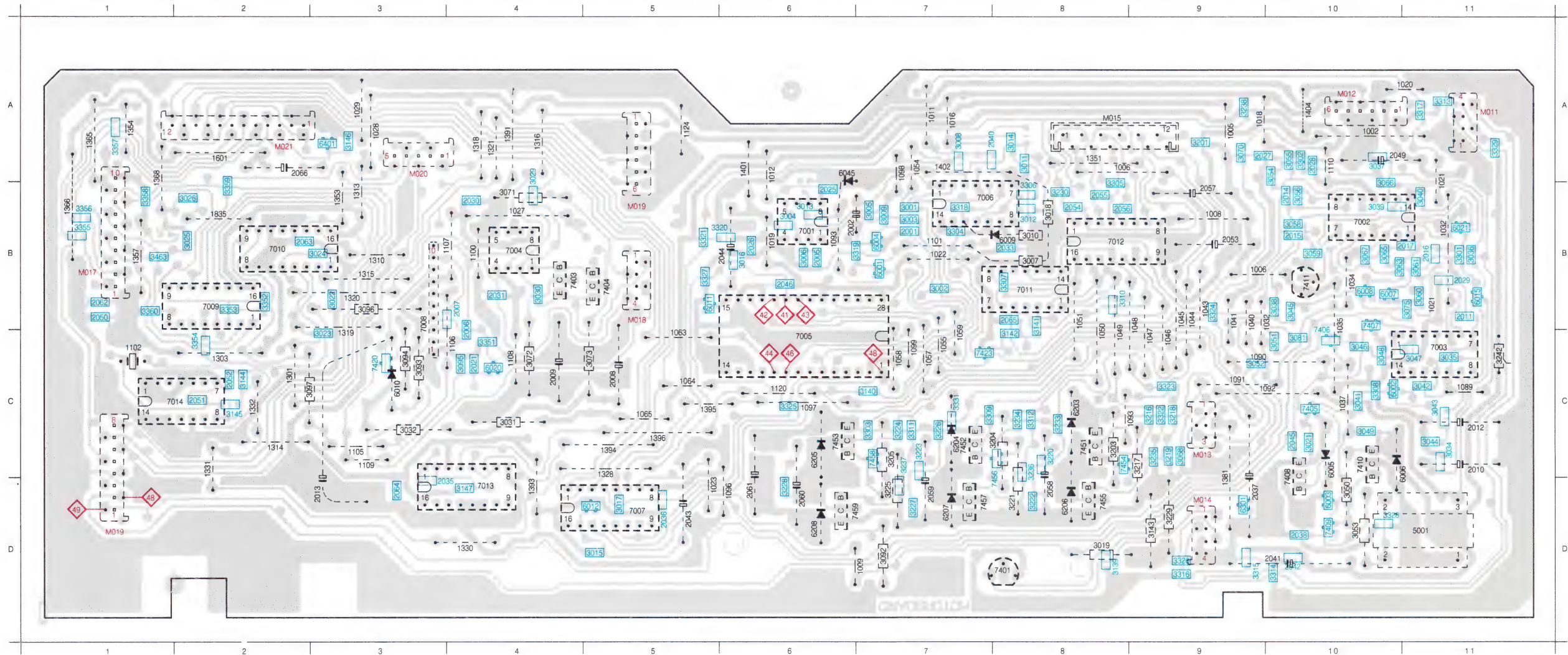


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	3067	B30		
	3068	C30		
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	3071	C28		
	3082	C 5		
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	3145	D 7		
	3147	J25		
K	3150	G19		
	3201	J 5		
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	3203	I 8		
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	3205	I 16		
	3216	N 7		
	3217	N 8		
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	3219	N 9		
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	327	L 7		
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	6003	E22		
	6004	E2		
	6005	G22		
	6006	E24		
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	6008	B27		
O	6009	E15		
	6010	E 5		
	6011	E 2		
	6015	E25		
	6021	D29		
	6045	E16		
	6203			
	6204	J13		



PRINT LAY-OUT MOTOR I

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1006 D 8	1027 C 4	1047 B 9	1090 B 9	1107 C 4	1319 B 3	1381 A 9	2006 B 4	2026 C 6	2043 A 5	2059 A 7	3007 C 8	3022 C10	3039 C10	3053 A10	3071 C 4	3142 B 8	3220 B 8	3236 A 8	3311 B 7	3325 B 6	3359 C 2	6011 C 5	7001 C 6	7401 A 8	7453 B 6	M019 A 1
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1009 A 7	1032 C11	1050 B 8	1093 B 9	1110 D10	1328 B 5	1394 B 5	2008 B 5	2028 D10	2045 B10	2061 A 6	3009 C 7	3025 C 2	3042 B11	3056 C10	3073 B 5	3144 B 9	3222 A 8	3238 D 9	3313 D11	3327 C 9	3463 C 1	6015 C11	7003 B11	7404 C 5	7455 B 8	M020 D 3
1011 D 7	1032 C10	1051 C 8	1093 C 6	1120 B 6	1330 A 4	1395 B 5	2010 B11	2030 C 4	2049 D10	2063 C 2	3011 D 8	3026 C 2	3043 B11	3058 C10	3081 B10	3146 D 3	3224 A 7	3301 C11	3315 A 9	3329 D11	6001 C 7	6021 C11	7005 B 6	7406 B10	7457 A 7	M021 D 2
1012 D 6	1034 C10	1054 D 7	1096 A 6	1124 D 5	1331 B 2	1396 B 5	2011 C11	2031 C 4	2050 C 1	2064 A 3	3012 C 8	3029 C 4	3044 B11	3059 C10	3092 A 7	3147 A 4	3225 A 7	3302 D10	3316 A 9	3331 B 7	6002 B10	6045 D 6	7006 C 7	7407 C10	7458 B 7	
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1018 D 9	1037 B10	1057 B 7	1098 D 7	1303 B 2	1351 D 8	1402 D 7	2013 A 9	2035 A 4	2052 B 2	2066 C 2	3014 D 8	3031 B 4	3046 B10	3061 C11	3094 B 3	3203 B 8	3227 A 7	3304 C 7	3318 C 7	3352 C 2	6004 C 7	6204 B 7	7008 C 3	7409 A10	M011 D11	
1019 C 6	1040 C 9	1058 B 7	1098 B 7	1310 C 3	1353 C 3	1404 D10	2014 C10	2036 A 5	2053 B 2	2067 C 2	3015 A 8	3032 B 3	3047 B11	3063 C11	3095 B 4	3204 B 8	3228 A 6	3305 C 8	3319 C 7	3353 C 2	6005 B10	6205 B 6	7009 C 3	7410 B10	M012 D11	
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1021 C11	1044 C 9	1064 B 5	1102 B 1	1315 C 3	1365 D 1	2001 C 7	2017 C11	2040 D 8	2056 C 8	3004 C 6	3018 C 8	3036 C11	3050 A10	3067 C10	3139 A 8	3217 B 9	3233 B 8	3308 B10	3322 B 9	3356 C 1	6008 C10	6208 A 6	7012 C 8	7423 B 7	M015 D 8	

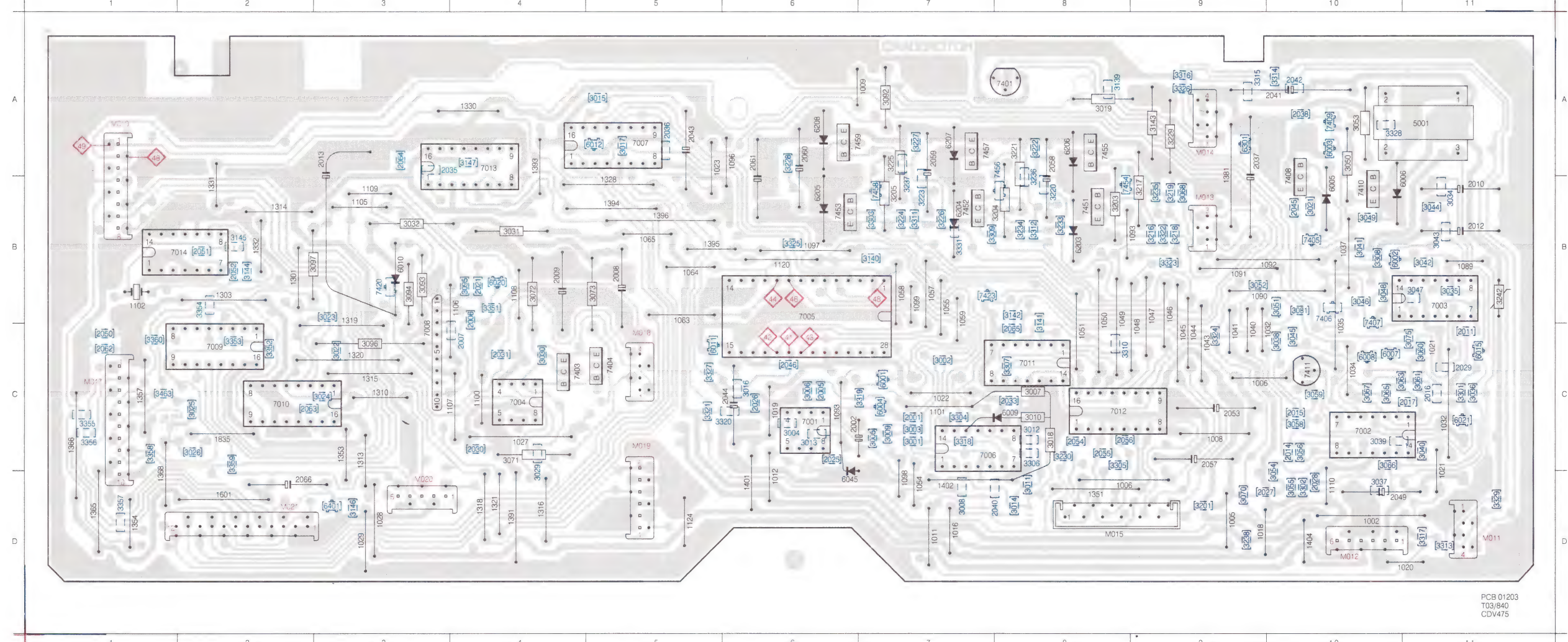


PRS 01241  
T-04 840  
CDV475



PRINT LAY-OUT MOTOR II

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1005 D 9	1023 A 5	1046 B 9	1089 B11	1106 B 4	1318 D 4	1368 D 1	2005 C 6	2025 C 6	2042 A10	2058 A 8	3006 C 6	3021 B10	3038 C10	3052 B 9	3070 D 9	3141 B 8	3219 B 8	3235 B 8	3310 C 8	3324 C 9	3358 C 1	6010 B 3	6401 D 3	7014 B 2	7452 B 7	M018 C 5
1006 D 8	1027 C 4	1047 B 9	1090 B 9	1107 C 4	1319 B 3	1381 A 9	2006 B 4	2026 C 6	2043 A 5	2059 A 7	3007 C 6	3022 C 3	3039 C10	3053 A10	3071 C 4	3142 B 8	3220 B 8	3236 A 8	3311 B 7	3325 B 6	3359 C 2	6011 C 5	7001 C 6	7401 A 8	7453 B 6	M019 A 1
1006 C 9	1028 D 3	1048 C 9	1091 B 9	1108 B 4	1320 C 3	1391 D 4	2007 C 4	2027 D10	2044 C 6	2060 A 6	3008 C 7	3023 B 3	3040 C11	3054 C10	3072 B 4	3143 A 9	3221 A 8	3237 B 7	3312 B 8	3326 A 9	3360 C 1	6012 A 5	7002 C10	7403 C 4	7454 B 8	M019 C 5
1008 C 9	1029 D 3	1049 B 8	1092 B10	1109 B 3	1321 D 4	1393 A 4	2008 B 5	2028 D10	2045 B10	2061 A 6	3009 C 7	3024 C 3	3041 B10	3055 D10	3073 B 5	3144 B 2	3222 A 8	3238 D 9	3313 D11	3327 C 5	3463 C 1	6015 C11	7003 B11	7404 C 5	7455 A 8	M020 D 3
1009 A 7	1032 C11	1050 B 8	1093 B 9	1110 D10	1328 B 5	1394 B 5	2009 B 4	2029 C11	2046 C 6	2062 C 1	3010 C 8	3025 C 3	3042 B11	3056 C10	3075 C11	3145 B 2	3223 B 7	3242 B11	3314 A10	3328 A10	5001 A11	6020 B 4	7004 C 4	7405 B10	7456 A 8	
1011 7	1032 C10	1051 C 8	1093 C 6	1120 B 6	1330 A 4	1395 B 9	2010 B11	2030 C 4	2049 D10	2063 C 2	3011 D 8	3026 C 3	3043 B11	3058 C10	3076 B10	3146 D 4	3224 B 7	3301 C11	3316 A 9	3329 D11	6001 C 7	6021 C11	7005 B 6	7406 B10	7457 A 7	
1012 D 6	1034 C10	1054 D 7	1096 A 6	1124 D 6	1331 B 2	1396 B 9	2011 C11	2031 C 4	2050 C 1	2064 A 3	3012 C 8	3028 C 3	3044 B11	3059 C10	3092 A 7	3147 D 4	3225 A 7	3302 D10	3317 A 9	3331 B 7	6002 B10	6045 D 6	7006 C 9	7407 C10	7458 B 7	
1016 D 7	1035 C10	1055 B 7	1097 B 6	1301 B 2	1332 B 2	1401 D 6	2012 B11	2033 C 8	2051 B 2	2065 C 8	3013 C 6	3030 C 3	3045 C10	3060 C11	3093 B 3	3201 D 9	3226 B 7	3303 C 7	3317 D11	3351 B 4	6003 A10	6203 B 8	7007 A 5	7408 A10	7459 A 6	
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1019 C 6	1040 C 9	1058 B 7	1099 B 7	1310 C 3	1353 C 3	1404 D10	2014 C10	2036 A 5	2053 C 9	3001 C 7	3015 A 5	3032 B 3	3047 B11	3063 C10	3095 B 3	3204 C 8	3228 A 6	3305 C 8	3319 C 7	3353 C 2	6005 B10	6205 B 6	7009 C 9	7410 B10	M012 D10	
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1021 C11	1044 C 9	1064 B 5	1102 B 1	1315 C 3	1365 D 1	2001 C 7	2017 C11	2040 D 8	2056 C 8	3004 C 6	3018 C 8	3036 C11	3050 A10	3067 C10	3139 A 8	3217 B 9	3233 B 8	3308 B10	3322 B 9	3356 C 1	6008 C10	6208 A 6	7012 C 8	7423 B 7	M015 D 8	



PCB 01203  
T03/840  
CDV475

MOTOR PANEL PARTSLIST

	4822 124 41557 ELCAP.BIP.2U2	5322 130 31928 BAS16		5001 4822 157 53196
	4822 122 32442 10NF 50V	4822 130 31982 BYV27-100		5002 4822 242 72046 X-TAL 7.5 MHZ
	4822 122 31974 820PF 10% 50V	4822 130 30621 1N4148		
	5322 122 31849 39NF 10% 63V	4822 130 33004 BZX84-B5V6		4822 130 40937 BC548B
	4822 122 33011 470 NF	4822 130 31983 BAT85		4822 130 40824 BD136
	4822 122 33156 100NF 63V	4822 130 80542 BZX84-C33		4822 130 40823 BD135
	5322 122 32933 1NF 5% 50V	4822 130 32699 HZ12B3 (13V)		5322 130 41982 BC848B
	4822 124 22221 100UF 20% 63V	5322 130 32026 HZ12B2		4822 130 60511 BC847B
		7001 4822 209 72123 NE5512N		4822 130 40982 BD437
		7002 4822 209 81451 NE5514N		5322 130 60508 BC857B
	4822 111 30517 22E 5% 0.33W	7003 4822 209 80631 LM339N (MTLA)		4822 130 40995 BD438
	4822 111 30528 56E 5% 0.33W	7004 4822 209 81349 MC1458P1 (MTLA)		4822 130 40855 BC337
	4822 111 90182 390K 2% 0.125W	7005 4822 209 72121 DSC-M/GS38FC307PA02		5322 130 41983 BC858B
	4822 111 30513 15E 5% 0.33W	7006 5322 209 10357 HEF4066BP		5322 130 44647 BC368
	4822 111 30492 2E2 5% 0.33W	7007 5322 209 10421 MC14094BCP		
	4822 111 30508 10E 5%	7008 4822 209 82059 BA6109		
	4822 111 30544 220E 5% 0.33W	7009 5322 209 10421 MC14094BCP		
	4822 111 30519 27E 5%	7010 4822 209 72423 MC14021BCP		
	4822 111 30483 1 5% 0.33W	7011 4822 209 10311 HEF4086BP		
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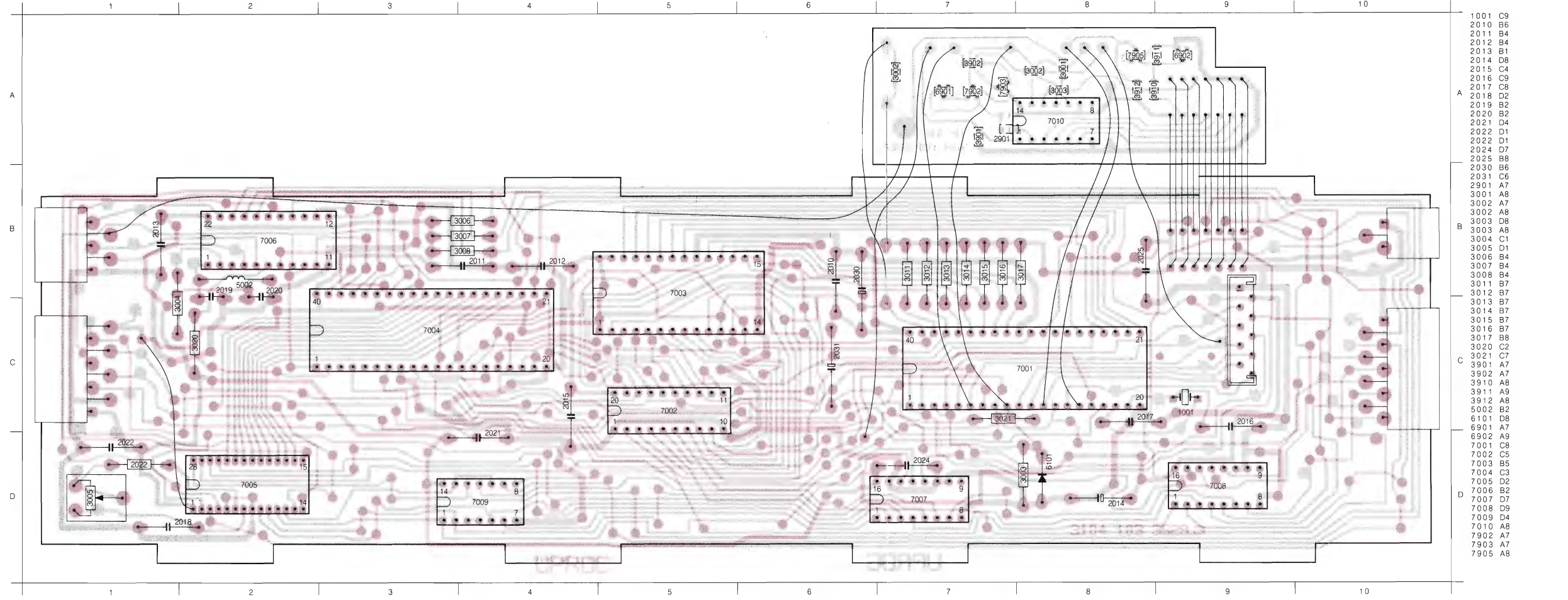


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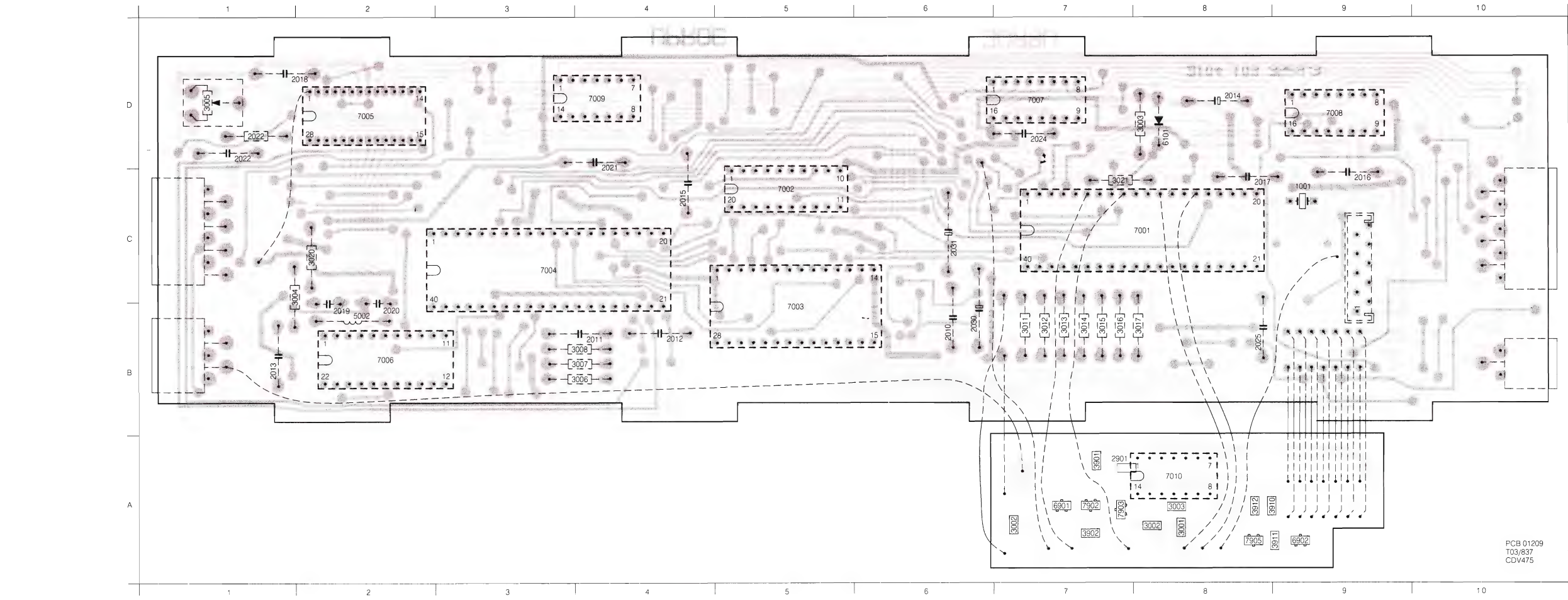


13. CONTROL AND DISPLAY AND CONNECTION SECTION

PRINT LAY-OUT  $\mu$ PROCESSOR



1001	C9
2010	B6
2011	B4
2012	B4
2013	B1
2014	D8
2015	C4
2016	C9
2017	C8
2018	D2
2019	B2
2020	B2
2021	D4
2022	D1
2022	D1
2024	D7
2025	B8
2030	B6
2031	C6
2901	A7
3001	A8
3002	A7
3002	A8
3003	D8
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3004	C1
3005	D1
3006	B4
3007	B4
3008	B4
3011	B7
3012	B7
3013	B7
3014	B7
3015	B7
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3017	B8
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3021	C7
3901	A7
3902	A7
3910	A8
3911	A9
3912	A8
5002	B2
6101	D8
6901	A7
6902	A9
7001	C8
7002	C5
7003	B5
7004	C3
7005	D2
7006	B2
7007	D7
7008	D9
7009	D4
7010	A8
7902	A7
7903	A7
7905	A8



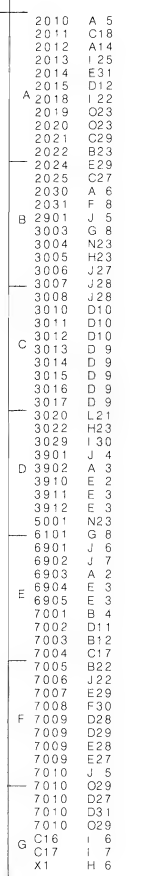
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2010	B6
2011	B4
2012	B4
2013	B1
2014	D8
2015	C4
2016	C9
2017	C8
2018	D2
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3012	B7
3013	B7
3014	B7
3015	B7
3016	B7
3017	B8
3020	C2
3021	C7
3901	A7
3902	A7
3910	A8
3911	A9
3912	A8
5002	B2
6101	D8
6901	A7
6902	A9
7001	C8
7002	C5
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7007	D7
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PCB 01209  
T03/837  
CDV475



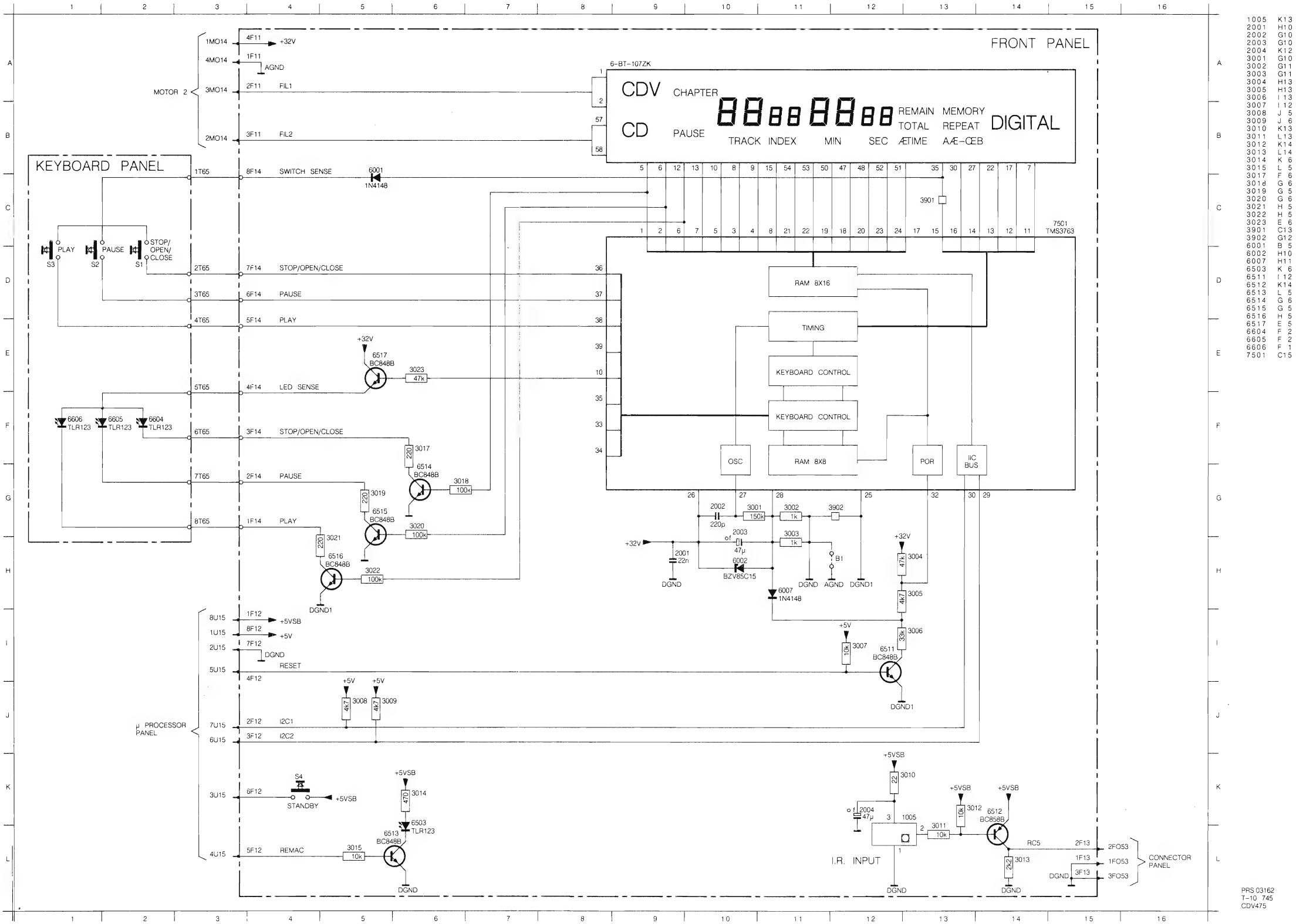

















CIRCUIT DIAGRAM FRONT AND KEYBOARD

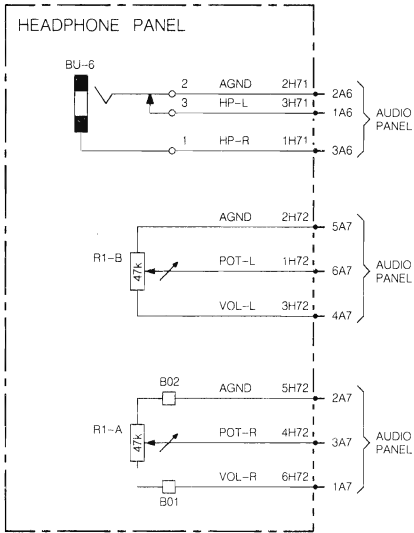




PARTSLIST

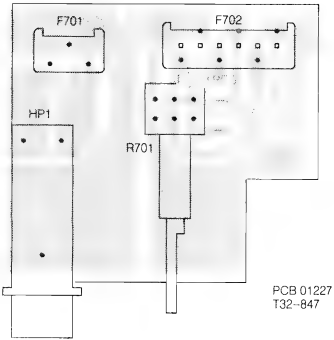
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<div></div> <div>5322 122 32143 22PF 100V 4822 122 31069 39PF 2% 100V</div>	<div></div> <div>4822 130 30621 1N4148 4822 130 33732 BZV85-C15 5322 130 34957 TLR123</div>
<div></div> <div>3005 4822 100 10874 TRIMMING POTMETER 1K LIN 20%</div>	<div></div> <div>5322 130 41982 BC848B 5322 130 41983 BC858B</div>
<div></div> <div>5001 4822 157 51316 LAL04T121K 4822 242 71845 X-TAL 12 MHZ</div>	<div></div> <div>7501 4822 209 73149 IC TMS3763CNL 217 4822 130 90495 DISPLAY 6-BT-1072K</div>
<div></div> <div>4822 130 30621 1N4148</div>	<div>KEY BOARD PANEL 3104 108 59280</div> <div>Various</div> <div>S1 4822 276 11276 SWITCH PLAY S2 4822 276 11276 SWITCH PAUSE S3 4822 276 11276 SWITCH STOP</div>
<div></div> <div>7001 4822 209 72411 MAB8032AH-12P 7002 5322 209 81648 SN74LS373N (MTLA) 7003 4822 209 73715 UPD27128D CDV475 7003 4822 209 73714 UPD27128D CDV475/95 7003 4822 209 73717 UPD27128D CV55 7003 4822 209 73716 UPD27128D CDV988 7004 4822 209 72028 8155 7005 4822 209 72409 MN1297Z 7006 4822 209 71277 PD0011 7007 5322 209 81521 N74LS157N 7008 5322 209 81521 N74LS157N 7009 5322 209 85311 SN74LS32N (MTLA) 7010 5322 209 81625 N74LS04N 7011 4822 130 44197 TRANS BC558B</div>	<div></div> <div>6604 5322 130 34957 TLR123 6605 5322 130 34957 TLR123 6606 5322 130 34957 TLR123</div> <div>HEADPHONE PANEL 3104 10859280</div> <div>Various</div> <div>3701 4822 102 10388 POTENTIOMETER B-6 4822 267 40661 HEADPHONE CONNECTOR</div>

HEADPHONE PANEL



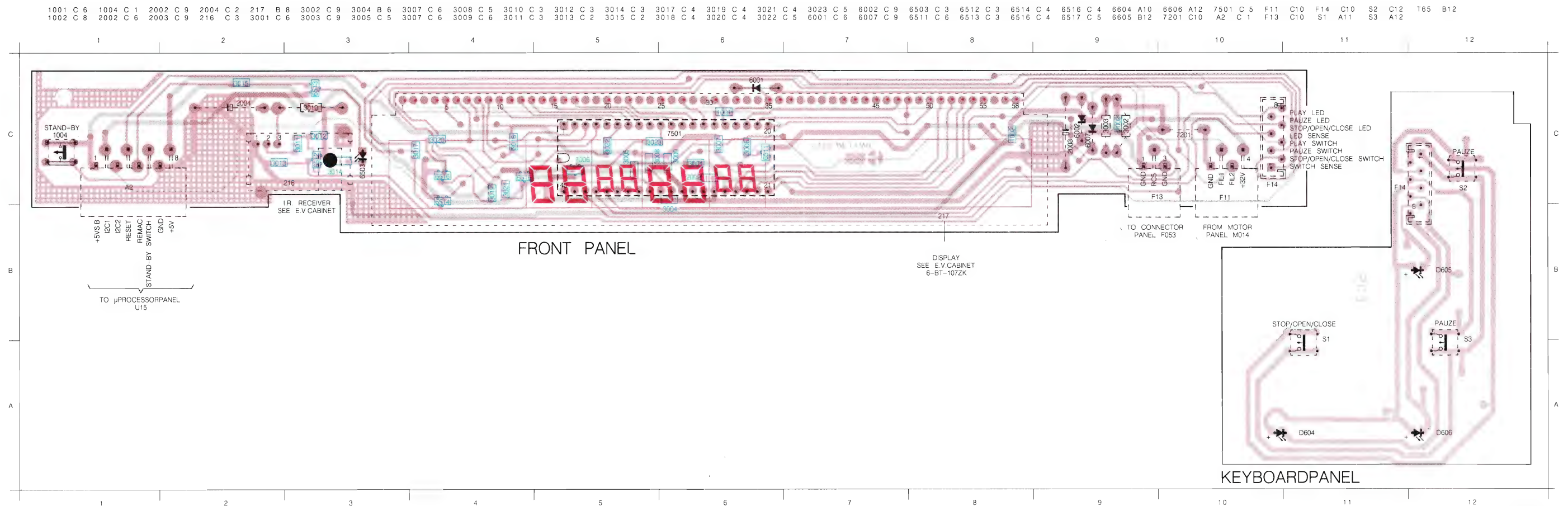
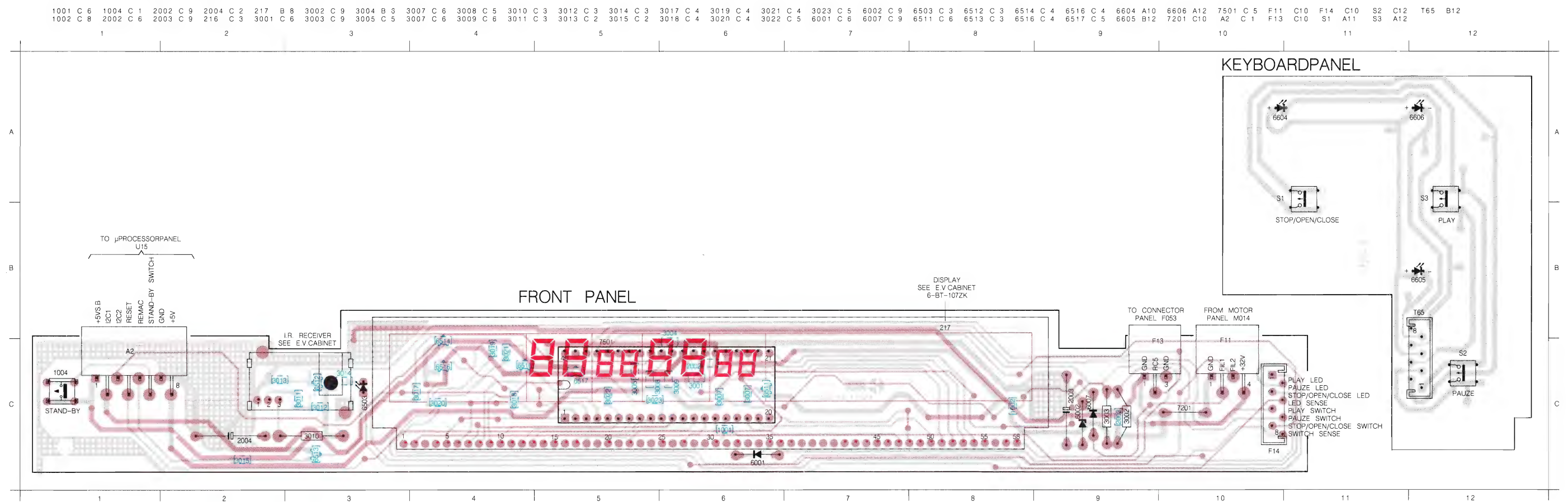
PRS 03429  
T32-816

HEADPHONE



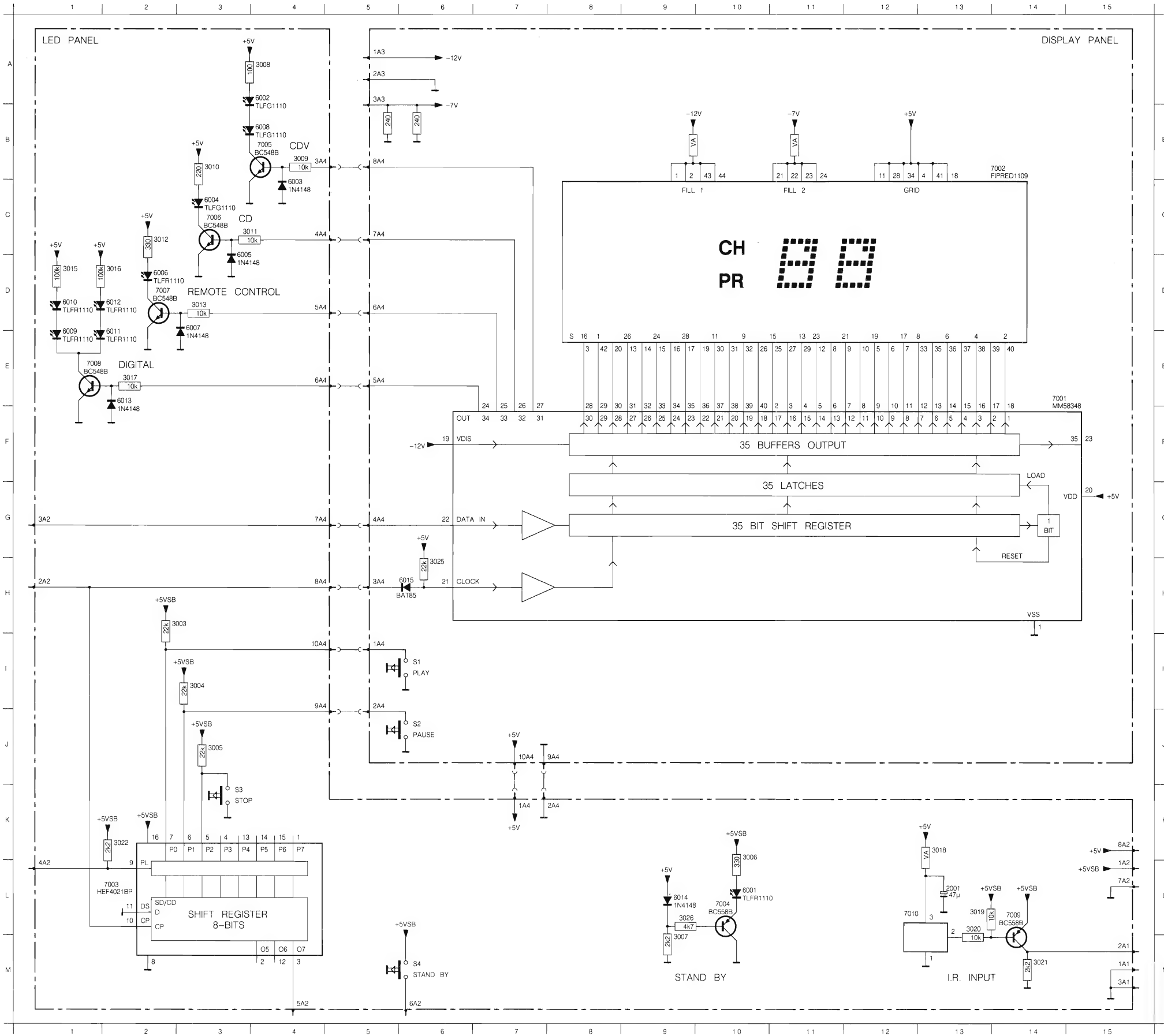


## PRINT LAY-OUT FRONT AND KEYBOARD





CIRCUIT DIAGRAM FRONT AND KEYBOARD CDV988

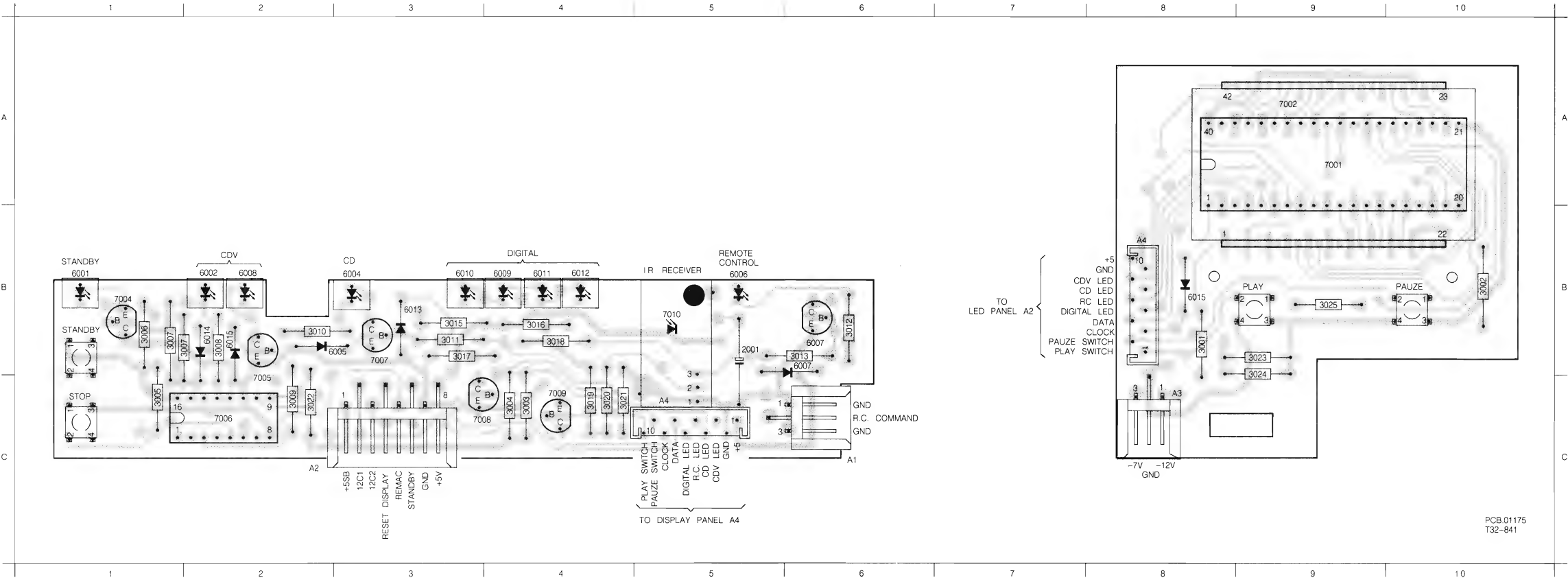


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3006	K10
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3008	A 4
3009	B 4
3010	B 3
3011	C 4
3012	C 2
3013	D 3
3015	D 1
3016	D 2
3017	E 2
3018	K13
3019	L13
3020	L13
3021	M14
3022	K 2
3025	H 6
3026	L 9
6001	L10
6002	A 4
6003	C 4
6004	C 3
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7006	C 3
7007	D 2
7008	E 1
7009	L14
7010	L12
S1	I 6
S2	J 6
S3	K 3
S4	M 6

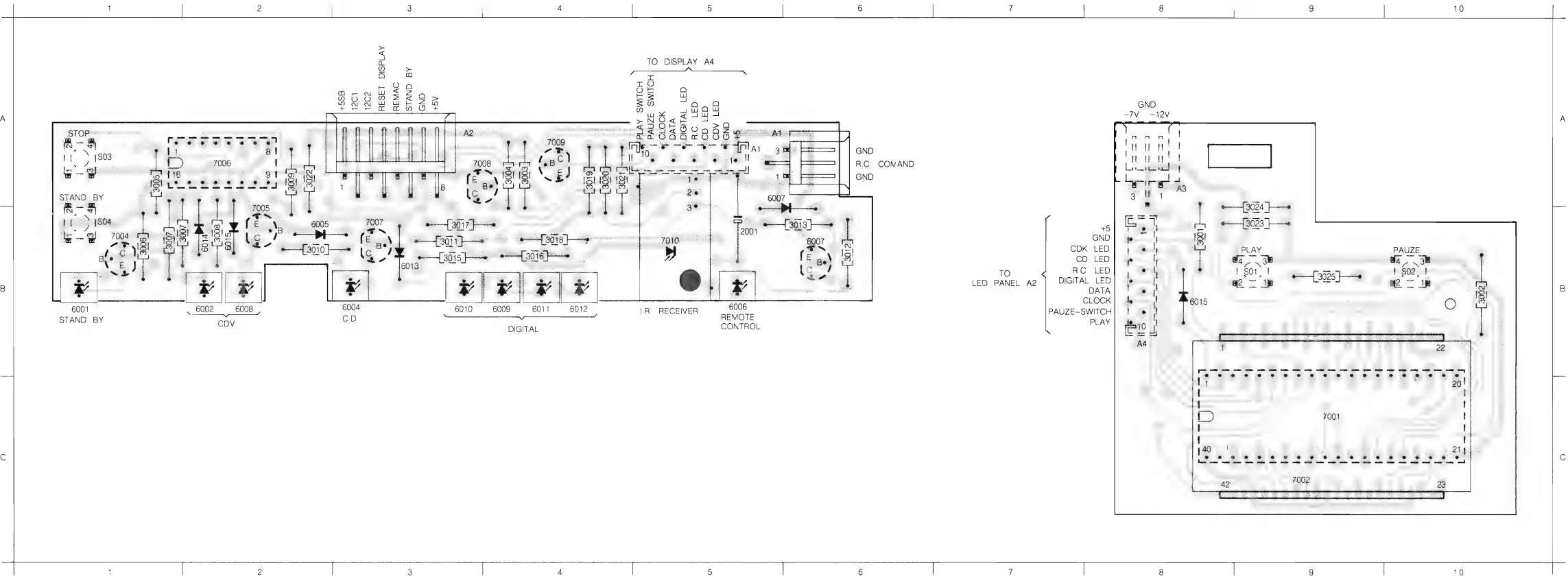


PRINT LAY-OUT FRONT AND KEYBOARD CDV988

2001 B 5 3003 C 4 3006 B 1 3008 B 2 3011 B 3 3015 B 3 3018 B 4 3021 C 4 3024 C 9 6002 B 2 6006 B 5 6008 B 2 6011 B 4 6014 B 2 7001 A 9 7005 C 2 7008 C 3 A1 C 6 A4 C 5  
3001 B 8 3004 C 4 3007 B 2 3009 C 2 3012 B 6 3016 B 4 3019 C 4 3022 C 2 3025 B 9 6004 B 3 6007 B 6 6009 B 4 6012 B 4 6015 B 2 7002 A 9 7006 C 2 7009 C 4 A2 C 2 A4 B 8  
3002 B10 3005 C 1 3007 B 1 3010 B 2 3013 B 6 3017 B 3 3020 C 4 3023 B 9 6001 B 1 6005 B 3 6007 B 6 6010 B 3 6013 B 3 6015 B 8 7004 B 1 7007 B 3 7010 B 5 A3 C 8






2001 B 5 3003 C 4 3006 B 1 3008 B 2 3011 B 3 3015 B 3 3018 B 4 3021 C 4 3024 B 9 6002 B 2 6006 B 5 6008 B 2 6011 B 4 6014 B 2 7001 A 9 7005 B 2 7008 C 3 A1 C 6 A4 B 8 S02 B10  
3001 B 8 3004 C 4 3007 B 2 3009 C 2 3012 B 6 3016 B 4 3019 C 4 3022 C 2 3025 B 9 6004 B 3 6007 C 5 6009 B 4 6012 B 4 6015 B 8 7002 A 9 7006 C 2 7009 C 4 A2 C 3 A4 C 5 S03 C 1  
3002 B10 3005 C 1 3007 B 1 3010 B 2 3013 B 6 3017 B 3 3020 C 4 3023 B 9 6001 B 1 6005 B 2 6007 B 6 6010 B 3 6013 B 3 6015 B 2 7004 B 1 7007 B 3 7010 B 5 A3 C 8 S01 B 9 S04 B 1

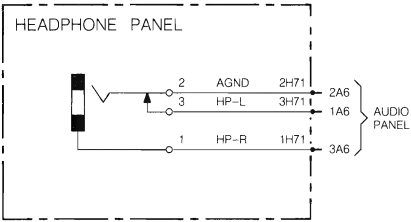




PARTSLIST

LED PANEL			
			
6001	4822 130 33528	LED FLTR 1110	RED
6002	4822 130 33528	LED FLTR 1110	RED
6009	4822 130 33528	LED FLTR 1110	RED
6010	4822 130 33528	LED TFLR 1110	RED
6011	4822 130 33528	LED TFLR 1110	RED
6012	4822 130 33528	LED TFLR 1110	RED
6004	4822 130 32545	LED TFLG 1110	GREEN
6008	4822 130 32545	LED TFLG 1110	GREEN
6006	4822 130 80849	LED TFLR 4499	RED
	4822 130 30621	DIODE IN4148	
	4822 130 31983	DIODE BAT 85	
			
	4822 209 72122	IC MM58348	
	4822 209 72423	IC MC14021BCP	
			
	4822 130 44197	TRANS BC558B	
	4822 130 40937	TRANSISTOR BC548B	
Various			
	4822 130 90554	FL. DISPLAY	
	4822 218 10213	IR.RECEIVER 0816/30	
S1	4822 276 11896	SWITCH PUSH	
S2	4822 276 11896	SWITCH PUSH	
S3	4822 276 11896	SWITCH PUSH	
S4	4822 276 11896	SWITCH PUSH	

HEADPHONE PANEL

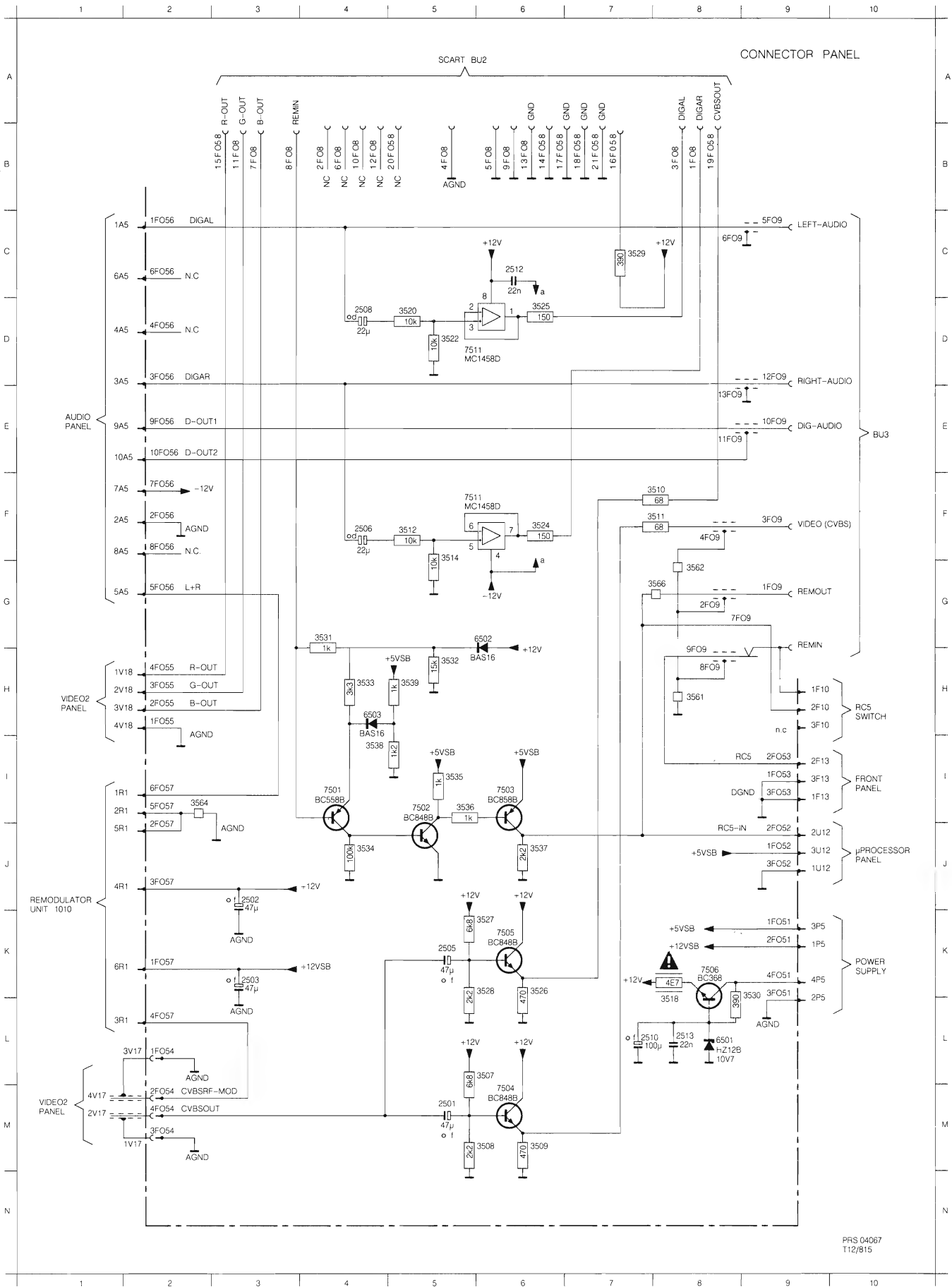


PRS 04066  
T12-816



## CIRCUIT DIAGRAM CONNECTOR PANEL CDV988

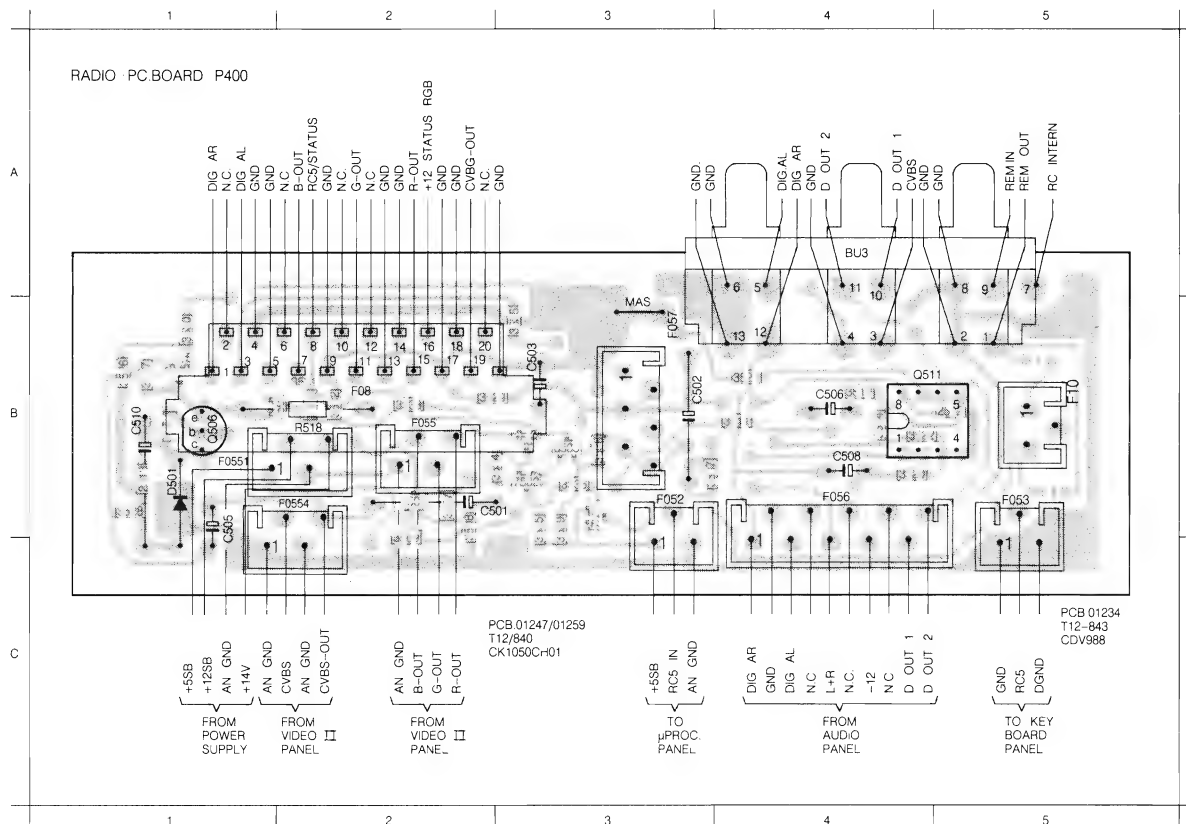
2501	M 5	2508	D 4	3508	M 6	3514	F 5	3525	D 6	3530	K 9	3535	I 5	3561	H 8	6502	G 6	7504	M 6
2502	J 3	2510	L 8	3509	M 6	3518	F 8	3526	K 6	3531	G 4	3536	I 5	3562	G 8	6503	H 4	7505	K 6
2503	K 3	2512	C 6	3510	F 8	3520	D 8	3527	K 6	3532	H 5	3537	J 6	3564	I 8	7501	I 4	7506	K 8
2505	K 5	2513	L 8	3511	F 8	3522	D 5	3528	K 6	3533	H 4	3538	I 4	3566	G 8	7502	I 5	7511	F 6
2506	F 4	3507	L 6	3512	F 5	3524	F 6	3529	C 7	3534	J 4	3539	H 5	6501	L 8	7503	I 6	7511	D 6










## PRINT LAY-OUT

2512	B 5	3512	B 4	3526	B 1	3531	B 2	3537	B 3	7501	B 3	C502	B 3	D501	B 1	F056	B 4	Q511	B 4
2513	B 1	3514	B 4	3527	B 1	3532	B 2	3538	B 3	7502	B 3	C503	B 3	F052	B 3	F057	B 3	R518	B 2
3507	B 2	3520	B 4	3528	B 1	3533	B 2	3539	B 3	7504	B 2	C505	B 1	F053	B 5	F08	B 2		
3508	B 2	3522	B 4	3529	B 3	3534	B 3	6502	B 2	7505	B 1	C506	B 4	F055	B 2	F10	B 5		
3509	B 2	3524	B 4	3530	B 1	3535	B 3	6503	B 3	BU3	A 4	C508	B 4	F0551	B 1	MAS	B 3		
3511	B 4	3525	B 3	3530	B 1	3536	B 3	75	B 3	C501	B 3	C510	B 1	F0554	B 2	Q506	B 1		





PARTSLIST  
CONNECTOR PANEL 3104 108 61220

	4822 124 41557	ELCAP BIP.220μF 10V
	4822 111 30499	NFR 4E7 5%
	5322 130 32026 5322 130 31928	HZ12B2 BAS16
	5322 130 41983 5322 130 41982 5322 130 44647	BC858B BC848B BC368
	7511 4822 209 81349	IC OPAMP MC1458P1
<b>Various</b>		
BU-2	4822 267 60172	SCART CONNECTOR
BU-3	4822 267 50801	CINCH CONNECTOR
BU-6	4822 267 40661	HEADPHONE CONNECTOR

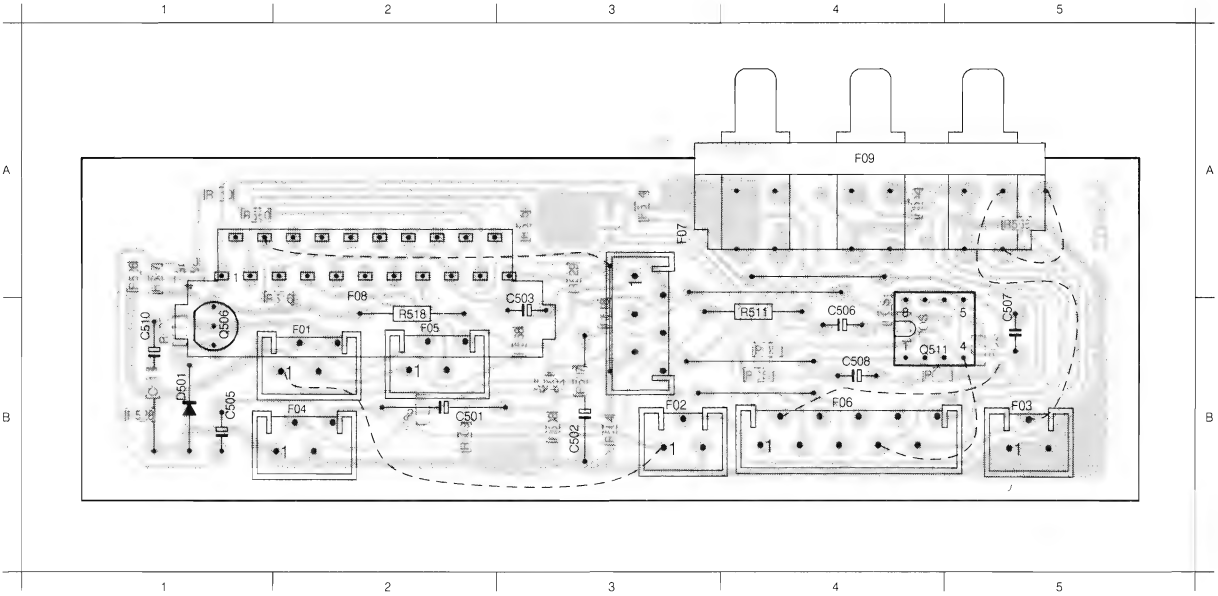


[illegible]

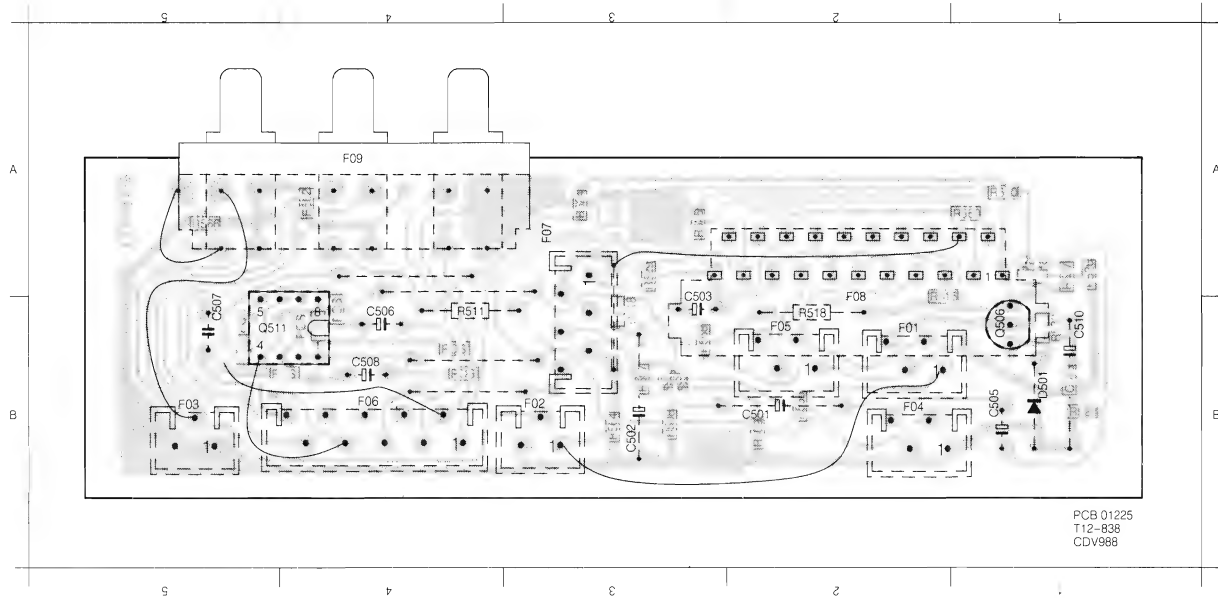


PRINT LAY-OUT

C501	B 2	C507	B 5	F01	B 2	F06	B 4	POS	B 4	Q504	B 3	R508	B 3	R518	B 2	R527	A 1	R562	A 4
C502	B 3	C508	B 4	F02	B 3	F07	A 3	POS	B 5	Q505	A 1	R509	B 2	R518	B 3	R528	B 1	R564	B 3
C503	B 3	C510	B 1	F03	B 5	F08	A 2	POS	B 4	Q506	B 1	R510	A 1	R524	A 3	R529	A 3	R565	B 2
C505	B 1	C513	B 1	F04	B 2	F09	A 4	POS	B 4	Q511	B 4	R511	B 4	R525	A 3	R530	B 1	R566	A 5
C506	B 4	D501	B 1	F05	B 2	POS	B 4	POS	B 4	R507	B 3	R516	B 2	R526	A 1	R560	A 1	R568	B 3



C501	B 2	C507	B 5	F01	B 2	F06	B 4	POS	B 4	Q504	B 3	R508	B 3	R518	B 2	R527	A 1	R562	A 4
C502	B 3	C508	B 4	F02	B 3	F07	A 3	POS	B 5	Q505	A 1	R509	B 2	R518	B 3	R528	B 1	R564	B 3
C503	B 3	C510	B 1	F03	B 5	F08	A 2	POS	B 4	Q506	B 1	R510	A 1	R524	A 3	R529	A 3	R565	B 2
C505	B 1	C513	B 1	F04	B 2	F09	A 4	POS	B 4	Q511	B 4	R511	B 4	R525	A 3	R530	B 1	R566	A 5
C506	B 4	D501	B 1	F05	B 2	POS	B 4	POS	B 4	R507	B 3	R516	B 2	R526	A 1	R560	A 1	R568	B 3





PCB 01225  
T12-B38  
CDV988



PARTS LIST

CONNECTOR PANEL 3104 108 59280

	5322 130 41982	BC848B
	4822 209 81349	MC 1458D
<b>Various</b>		
B-2	4822 267 60172	SCART CONNECTOR
B-3	4822 267 50801	CINCH CONNECTOR

SER

ON

PLA

CD8  
CDV  
SINC

CDV  
8" A  
12"

L.V.  
CAV

L.V.  
CLV





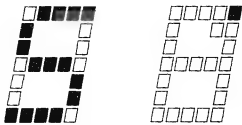



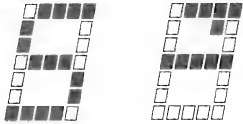
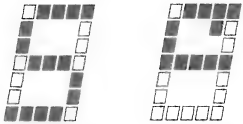

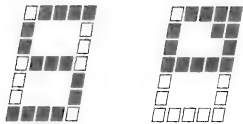
## SERVICE ROUTINES

STEP	ON DISPLAY	REMARKS
1	STAND-BY LED ON	PUSH THE BUTTONS STOP/OPEN/CLOSE AND PAUSE TOGETHER AND KEEP THEM PRESSED UNTIL STEP 3
2	STAND-BY LED OUT 5 FROM "SERVICE" APPEARS	PUSH THE BUTTON POWER ON/STAND-BY
3		LOAD A DISC
4		PUSH THE PLAY BUTTON
5	5 -	LEAD IN AREA REACHED
6	5 7	FOCUS POINT FOUND
7	5 7	RADIAL TRACKING ACTIVE
8	5 7	TURNTABLE MOTOR IN PHASE LOCK
9	5 7	O.P.U. STEP CONTROL ACTIVE
10	5 0	O.P.U. CONTROL ACTIVE
11	5 8	SUBCODE READING ACTIVE (CD,CDV-SINGLE) MANCHESTER CODE READING ACTIVE (L.V.-DISC)

MDA.01574  
T07-838



SERVICE ROUTINES **CDV988**

STEP	ON DISPLAY	REMARKS
1	STANDBY LED ON	PUSH THE BUTTONS STOP AND PAUSE TOGETHER AND KEEP THEM PRESSED UNTIL STEP 3
2	STANDBY LED OUT 	PUSH THE BUTTON STAND-BY 2X
3		LOAD A DISC
4		PUSH THE PLAY BUTTON
5		LEAD IN AREA REACHED
6		FOCUS POINT FOUND
7		RADIAL TRACKING ACTIVE
8		TURNTABLE MOTOR IN PHASE LOCK (L.V.)
9		O.P.U. STEP CONTROL ACTIVE
10		O.P.U. CONTROL ACTIVE
11		SUBCODE READING ACTIVE (CD,CDV-SINGLE) MANCHESTER CODE READING ACTIVE (L.V.-DISC)

SER  
ON  
PLACD&  
CDV  
SINGCDV  
8" A  
12"L.V.  
CAVL.V.  
CLV



PLAY FOR A,B,C,D AND E SEE MDA.01575

CD&  
CDV  
SINGLE

[illegible]

CDV  
8" AND  
12"

[illegible]L.V.  
CAV[illegible]

L.V.  
CLV

MANCH CODE      A      B      C      D      E

CHAPTER



=UNREADABLE INFORMATION

MDA.01573  
T07-838



SERVICE ROUTINES

A. READ STATUS FLAG.

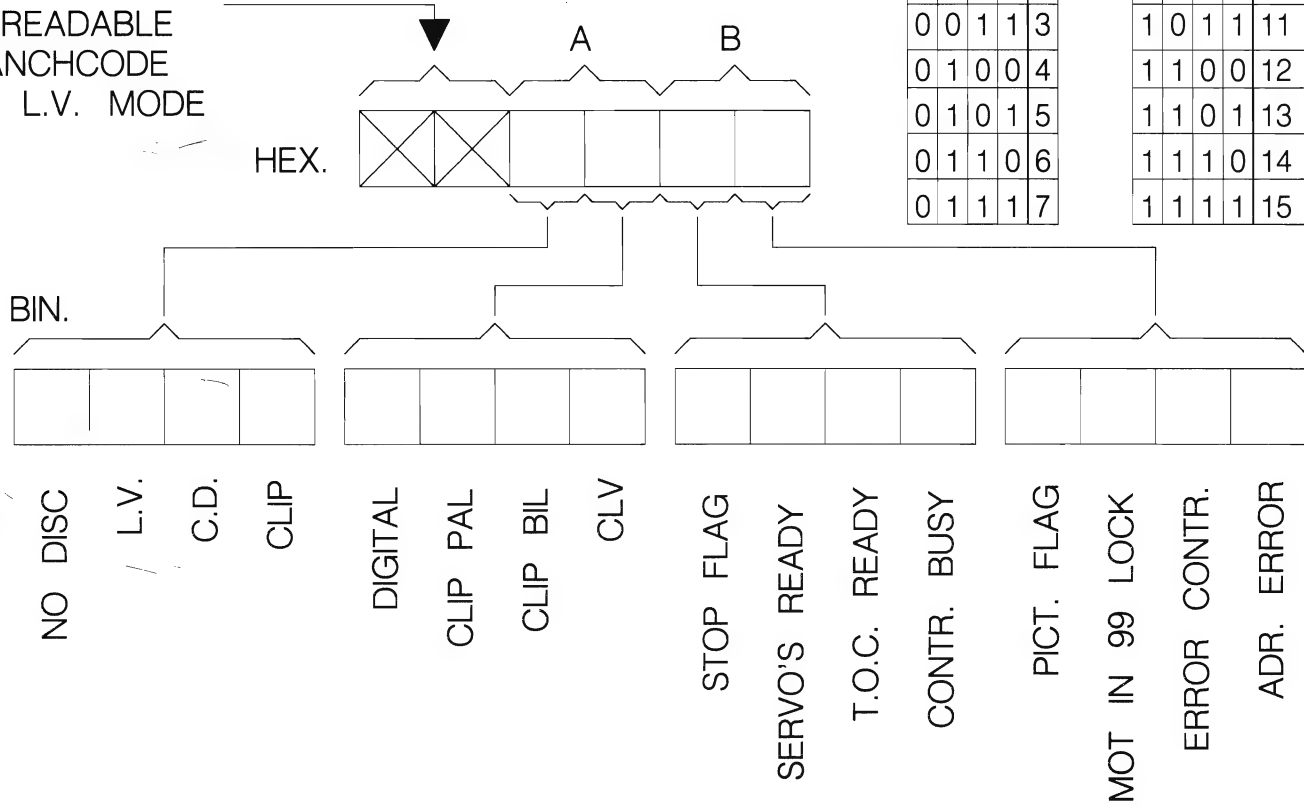
B. CONTROL STATUS FLAG.

HEX. CONV. TABLE

0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7

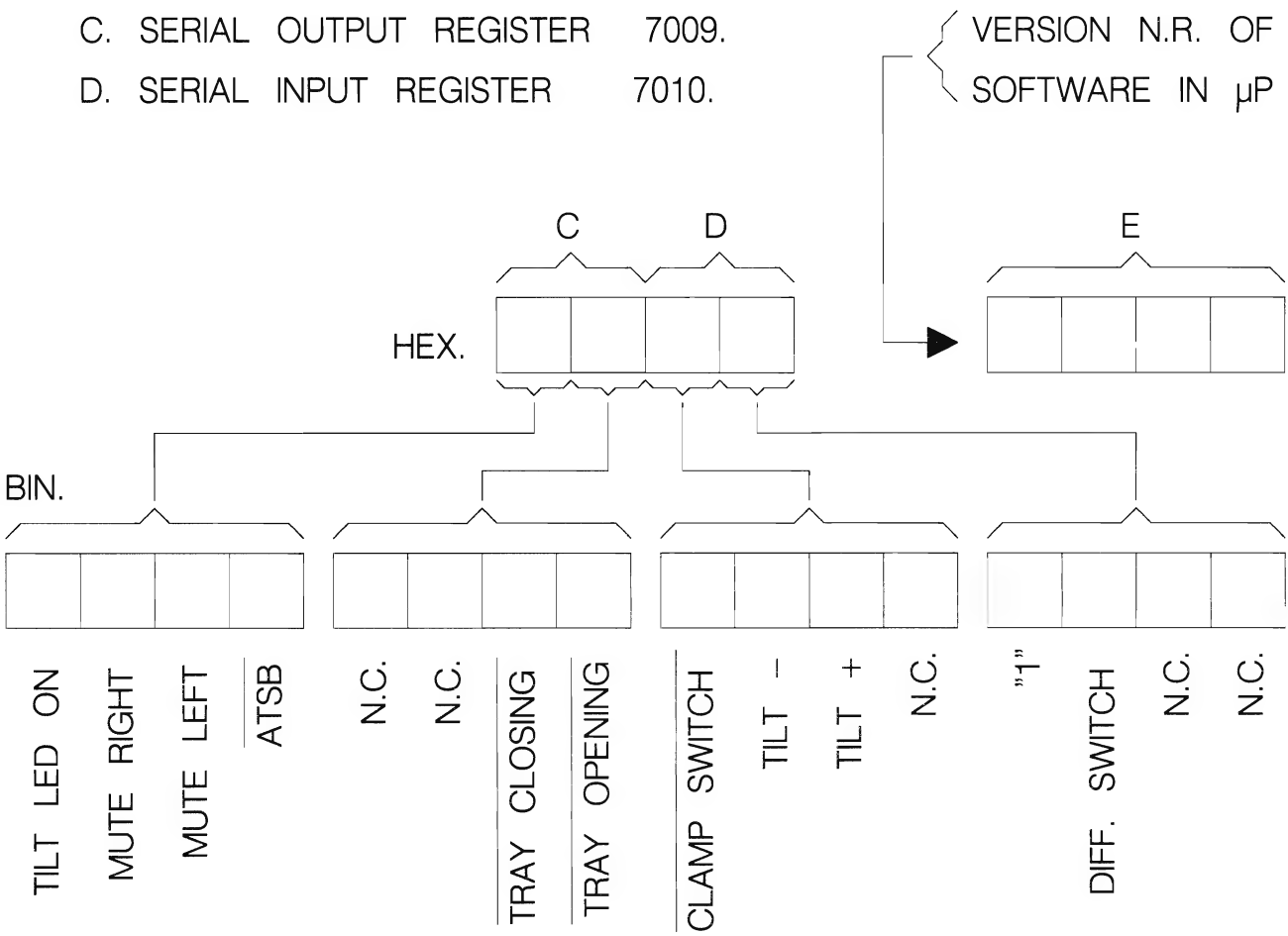
1	0	0	0	8
1	0	0	1	9
1	0	1	0	10
1	0	1	1	11
1	1	0	0	12
1	1	0	1	13
1	1	1	0	14
1	1	1	1	15

UNREADABLE  
MANCHCODE  
AT L.V. MODE





- C. SERIAL OUTPUT REGISTER 7009.
- D. SERIAL INPUT REGISTER 7010.



MDA.01575  
T07-838

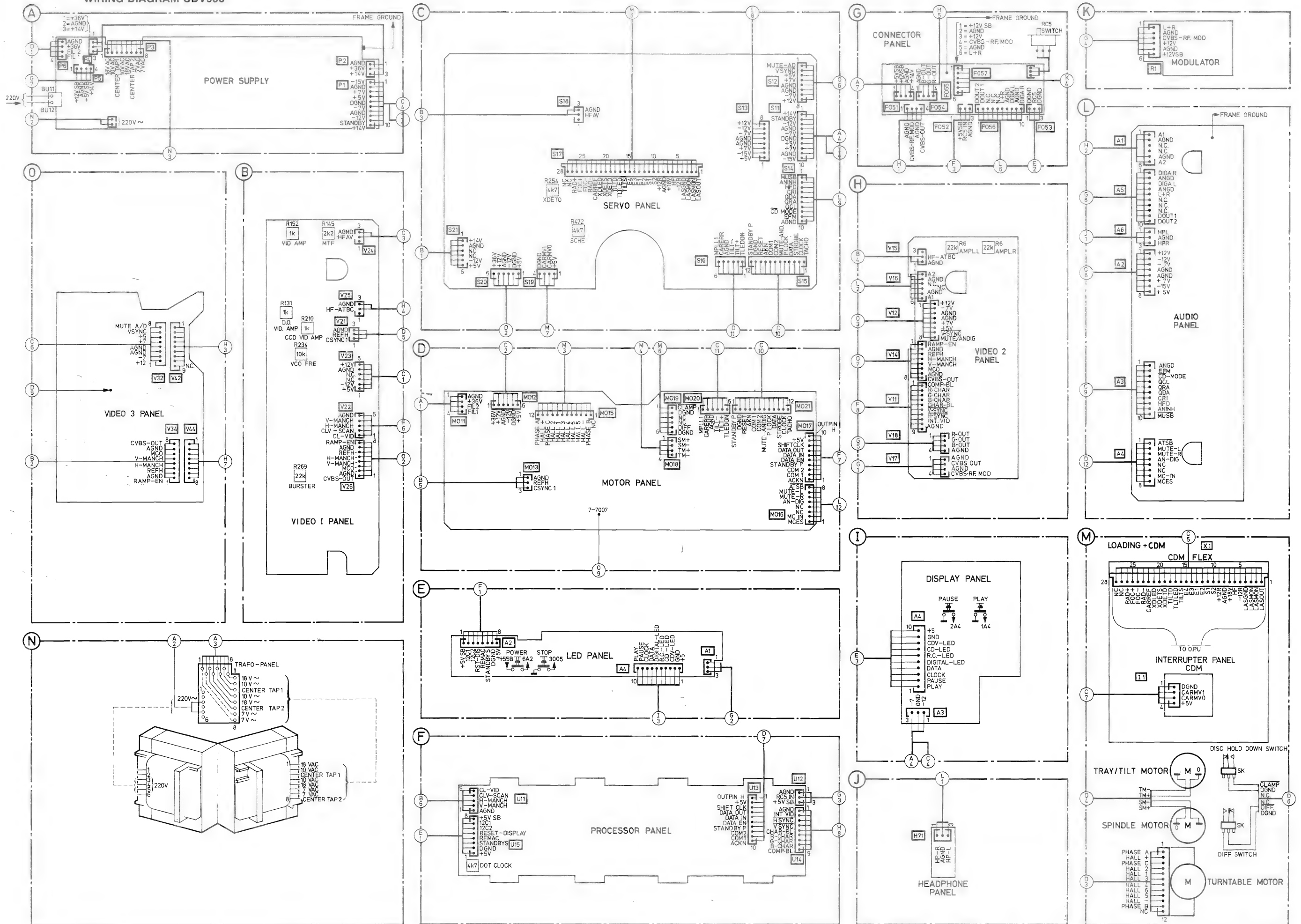






WIRING DIAGRAM CDV988

15-2 15-2





## 16. SYMBOLS/CHIPCOMPONENTS

SYMBOL	DESCRIPTION
	Capacitor, general
	Electrolytic capacitor (+ and - may be omitted)
	Bipolar electrolytic capacitor (+ may be omitted)
	Resistor, general
	N.T.C. resistor
	P.T.C. resistor
	Voltage divider with preset adjustment
	Chip jumper
	Pin contact
	Bus contact
	Coil, self-induction
	Transformer with electrically poor conducting core and adjustable pre-magnetization
	Diode
	Zener diode
	Stabistor
	Double variable capacity diode (in one envelope)
	Photo conductive diode
	L.E.D.

SYMBOL	DESCRIPTION
	Transistor (N.P.N.)
	Transistor (P.N.P.)
	Direct current (DC)
	Alternating current (AC)
	Earth (functional)
	Frame or chassis connection
	Direction in which AC voltages are passed on (optional present)
	Interrupted line
	Not-connected crossing lines
	Connected lines
	Cable tree with lead-outs
	Changer, general (arrow is optional)
	Voltage Controlled Oscillator
	Band-pass filter
	Phase changing network
	Delay element
	Amplifier, general



SYMBOL	DESCRIPTION
	Operational amplifier
	Differential amplifier
	Splitter
	Operational amplifier with open output
	Exclusive OR gate
	True/complement amplifier with high input
	Flip Flop
	AND gate
	OR gate
	Inverter with high input

	0.2W (CR 16)	$\leq 220k\Omega$ $> 270k\Omega$	5% 10%
	0.33W (CR 25)	$\leq 1 M\Omega$ $> 1 M\Omega$	5% 10%
	0.33W (SFR25)		5%
	0.25W (VR 25)	$\leq 10M\Omega$ $> 10M\Omega$	5% 10%
	0.5W (CR 37)	$\leq 1 M\Omega$ $> 1 M\Omega$	5% 10%
	0.67W (CR 52)		5%
	1.15W (CR 68)		5%





  

	Ceramic plate
	Polyester flat foil
	Polyester mepolesco
	Mylar (Polyester flat foil small sized)
	Micropoco
	Tubular ceramic (body colour pink or yellow/green)
	Miniature single elco
	Subminiature tantalum

a = 2.5 V
b = 4 V
c = 6.3 V
d = 10 V
e = 16 V
f = 25 V
g = 40 V
h = 63 V
i = 100 V
j = 125 V
l = 125 V
m = 150 V
n = 160 V
q = 200 V
r = 250 V
s = 300 V
t = 350 V
u = 400 V
v = 500 V
w = 630 V
x = 1000 V
A = 1.6 V
B = 6 V
C = 12 V
D = 15 V
E = 20 V
F = 35 V
G = 50 V
H = 75 V
I = 80 V



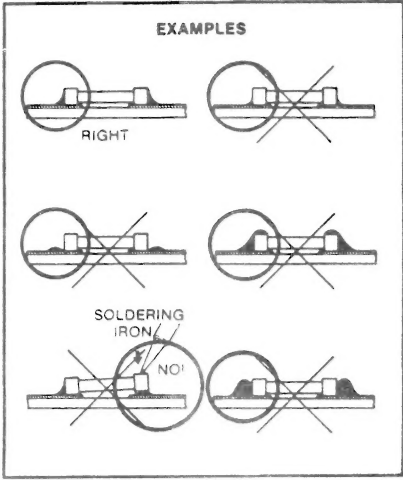
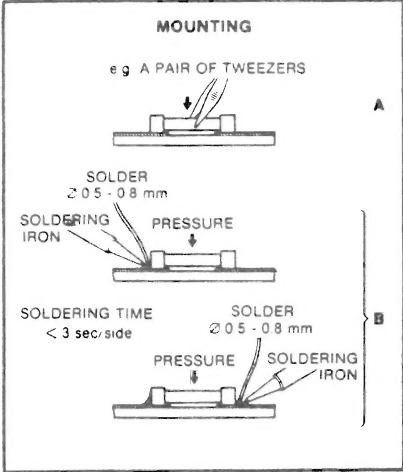
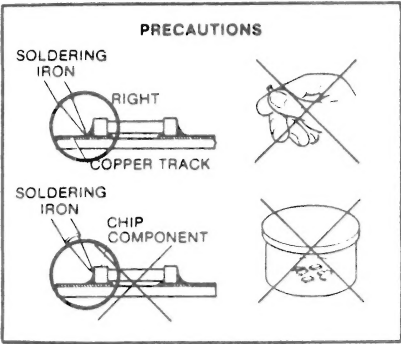
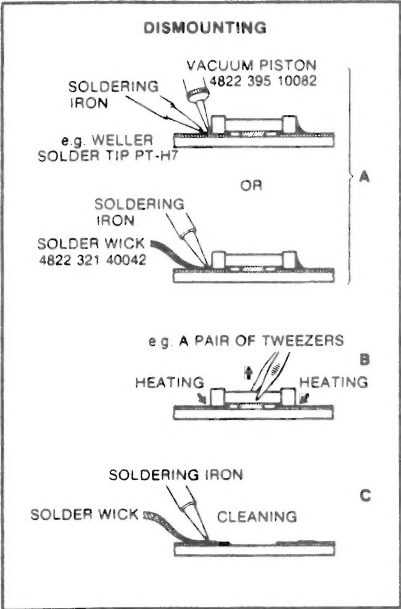
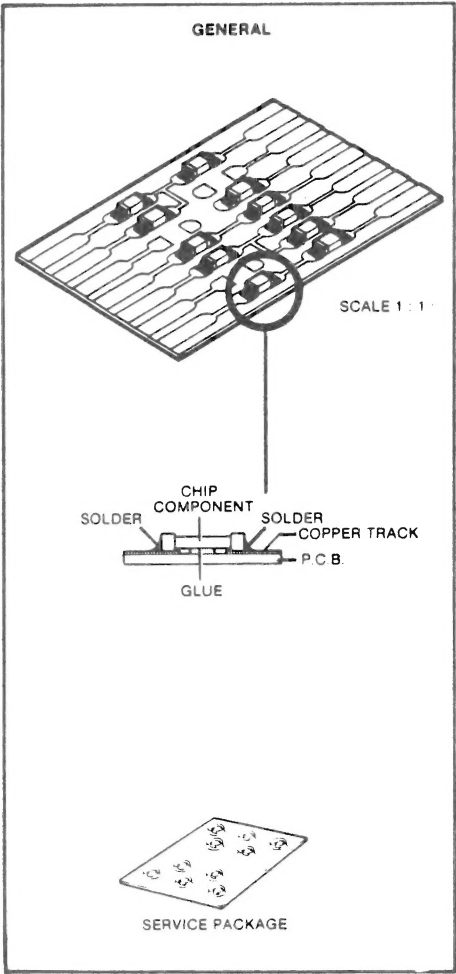
©  Chips 50 V NP0 S1206				©  Chips 0,125 W S1206				©  Chips 0,125 W S1206				1U
1 pF	5%	4822 122 32479		4,7 E	5%	5322 111 90376		6,8 k	2%	4822 111 90544		
1,2 pF	5%	4822 122 33013		5,1 E	5%	4822 111 90393		7,5 k	2%	4822 111 90276		
1,5 pF	5%	4822 122 31792		5,6 E	5%	4822 111 90394		8,2 k	2%	5322 111 90118		
1,8 pF	5%	4822 122 32087		6,2 E	5%	4822 111 90395		9,1 k	2%	4822 111 90373		
2,2 pF	5%	4822 122 32425		6,8 E	5%	4822 111 90254		10 k	2%	4822 111 90249		
3,3 pF	5%	4822 122 32079		7,5 E	5%	4822 111 90396		11 k	2%	4822 111 90337		
3,9 pF	5%	4822 122 32081		8,2 E	5%	4822 111 90397		12 k	2%	4822 111 90253		
4,7 pF	5%	4822 122 32082		9,1 E	5%	4822 111 90398		13 k	2%	4822 111 90509		
5,6 pF	5%	4822 122 32506		10 E	2%	5322 111 90095		15 k	2%	4822 111 90196		
6,8 pF	5%	4822 122 32507		11 E	2%	4822 111 90338		16 k	2%	4822 111 90346		
8,2 pF	5%	4822 122 32083		12 E	2%	4822 111 90341		18 k	2%	4822 111 90238		
10 pF	5%	4822 122 31971		13 E	2%	4822 111 90343		20 k	2%	4822 111 90349		
12 pF	5%	4822 122 32139		15 E	2%	4822 111 90344		22 k	2%	4822 111 90251		
15 pF	5%	4822 122 32504		16 E	2%	4822 111 90347		24 k	2%	4822 111 90512		
18 pF	5%	4822 122 31769		18 E	2%	5322 111 90139		27 k	2%	4822 111 90542		
22 pF	10%	4822 122 31837		20 E	2%	4822 111 90352		30 k	2%	4822 111 90216		
27 pF	5%	4822 122 31966		22 E	2%	4822 111 90186		33 k	2%	5322 111 90267		
33 pF	5%	4822 122 31756		24 E	2%	4822 111 90355		36 k	2%	4822 111 90514		
39 pF	5%	4822 122 31972		27 E	2%	5322 111 90105		39 k	2%	5322 111 90108		
47 pF	5%	4822 122 31772		30 E	2%	4822 111 90356		43 k	2%	4822 111 90363		
56 pF	5%	4822 122 31774		33 E	2%	4822 111 90357		47 k	2%	4822 111 90543		
68 pF	5%	4822 122 31961		36 E	2%	4822 111 90359		51 k	2%	5322 111 90274		
82 pF	10%	4822 122 31839		39 E	2%	4822 111 90361		56 k	2%	4822 111 90573		
100 pF	5%	4822 122 31765		43 E	2%	5322 116 90125		62 k	2%	5322 111 90275		
120 pF	5%	4822 122 31766		47 E	2%	4822 111 90217		68 k	2%	4822 111 90202		
150 pF	5%	4822 122 31767		51 E	2%	4822 111 90365		75 k	2%	4822 111 90574		
180 pF	2%	4822 122 31794		56 E	2%	4822 111 90239		82 k	2%	4822 111 90575		
220 pF	5%	4822 122 31965		62 E	2%	4822 111 90367		91 k	2%	5322 111 90277		
270 pF	5%	4822 122 32142		68 E	2%	4822 111 90203		100 k	2%	4822 111 90214		
330 pF	10%	4822 122 31642		75 E	2%	4822 111 90371		110 k	2%	5322 111 90269		
390 pF	5%	4822 122 31771		82 E	2%	4822 111 90124		120 k	2%	4822 111 90568		
470 pF	5%	4822 122 31727		91 E	2%	4822 111 90375		130 k	2%	4822 111 90511		
560 pF	5%	4822 122 31773		100 E	2%	5322 111 90091		150 k	2%	5322 111 90099		
680 pF	5%	4822 122 31775		110 E	2%	4822 111 90335		160 k	2%	5322 111 90264		
820 pF	5%	4822 122 31974		120 E	2%	4822 111 90339		180 k	2%	4822 111 90565		
1 nF	10%	5322 122 31647		130 E	2%	4822 111 90164		200 k	2%	4822 111 90351		
1,2 nF	5%	4822 122 31807		150 E	2%	5322 111 90098		220 k	2%	4822 111 90197		
1,5 nF	10%	4822 122 31781		160 E	2%	4822 111 90345		240 k	2%	4822 111 90215		
1,8 nF	10%	4822 122 32153		180 E	2%	5322 111 90242		270 k	2%	4822 111 90302		
2,2 nF	10%	4822 122 31644		200 E	2%	4822 111 90348		300 k	2%	5322 111 90266		
2,7 nF	10%	4822 122 31783		220 E	2%	4822 111 90178		330 k	2%	4822 111 90513		
3,3 nF	10%	4822 122 31969		240 E	2%	4822 111 90353		360 k	2%	4822 111 90515		
3,9 nF	10%	4822 122 32566		270 E	2%	4822 111 90154		390 k	2%	4822 111 90182		
4,7 nF	10%	4822 122 31784		300 E	2%	4822 111 90156		430 k	2%	4822 111 90168		
5,6 nF	10%	4822 122 31916		330 E	2%	5322 111 90106		470 k	2%	4822 111 90161		
6,8 nF	10%	4822 122 31976		360 E	1%	4822 111 90288		510 k	2%	4822 111 90364		
10 nF	10%	4822 122 31728		360 E	2%	4822 111 90358		560 k	2%	4822 111 90169		
12 nF	10%	5322 122 31648		390 E	2%	5322 111 90138		620 k	2%	4822 111 90213		
15 nF	10%	4822 122 31782		430 E	2%	4822 111 90362		680 k	2%	4822 111 90368		
18 nF	10%	4822 122 31759		470 E	2%	5322 111 90109		750 k	2%	4822 111 90369		
22 nF	10%	4822 122 31797		510 E	2%	4822 111 90245		820 k	2%	4822 111 90205		
27 nF	10%	4822 122 32541		560 E	2%	5322 111 90113		910 k	2%	4822 111 90374		
33 nF	10%	4822 122 31981		620 E	2%	4822 111 90366		1 M	2%	4822 111 90252		
47 nF	10%	4822 122 32542		680 E	2%	4822 111 90162		1,1 M	5%	4822 111 90408		
56 nF	10%	4822 122 32183		750 E	2%	5322 111 90306		1,2 M	5%	4822 111 90409		
100 nF	10%	4822 122 31947		820 E	2%	4822 111 90171		1,3 M	5%	4822 111 90411		
180 nF	10%	4822 122 32915		910 E	2%	4822 111 90372		1,5 M	5%	4822 111 90412		
220 nF	20%	4822 122 32715		1 k	2%	5322 111 90092		1,6 M	5%	4822 111 90413		
©  Chips 0,125 W S1206 NP0				1,1 k	2%	4822 111 90336		1,8 M	5%	4822 111 90414		
0 E	jumper	4822 111 90163		1,2 k	2%	5322 111 90096		2 M	5%	4822 111 90415		
1 E	5%	4822 111 90184		1,3 k	2%	4822 111 90244		2,2 M	5%	4822 111 90185		
1,1 E	5%	4822 111 90377		1,5 k	2%	4822 111 90151		2,4 M	5%	4822 111 90416		
1,2 E	5%	4822 111 90378		1,6 k	2%	5322 111 90265		2,7 M	5%	4822 111 90417		
1,3 E	5%	4822 111 90379		1,8 k	2%	5322 111 90101		3 M	5%	4822 111 90418		
1,5 E	5%	4822 111 90381		2 k	2%	4822 111 90165		3,3 M	5%	4822 111 90191		
1,6 E	5%	4822 111 90382		2,2 k	2%	4822 111 90248		3,6 M	5%	4822 111 90419		
1,8 E	5%	4822 111 90383		2,4 k	2%	4822 111 90289		3,9 M	5%	4822 111 90421		
2 E	5%	4822 111 90384		2,7 k	2%	4822 111 90569		4,3 M	5%	4822 111 90422		
2,2 E	5%	5322 111 90104		3 k	2%	4822 111 90198		4,7 M	5%	4822 111 90423		
2,4 E	5%	4822 111 90385		3,3 k	2%	4822 111 90157		5,1 M	5%	4822 111 90424		
2,7 E	5%	4822 111 90386		3,6 k	2%	5322 111 90107		5,6 M	5%	4822 111 90425		
3 E	5%	4822 111 90387		3,9 k	2%	4822 111 90571		6,2 M	5%	4822 111 90426		
3,3 E	5%	4822 111 90388		4,3 k	2%	4822 111 90167		6,8 M	5%	4822 111 90235		
3,6 E	5%	4822 111 90389		4,7 k	2%	5322 111 90111		7,5 M	5%	4822 111 90427		
3,9 E	5%	4822 111 90391		5,1 k	2%	5322 111 90268		8,2 M	5%	4822 111 90237		
4,3 E	5%	4822 111 90392		5,6 k	2%	4822 111 90572		9,1 M	5%	4822 111 90428		
				6,2 k	2%	4822 111 90545		10M	5%	5322 111 91141		



**CHANGES/ADDITIONS**



17.SMD MOUNTING/DEMOUNTING



27 012C12

Signal

SB  
ACK  
ACKN  
AKN  
ADC  
AGC(K)  
AGND  
AGNDB  
ANGD  
ALE  
AMPL.L  
AMPL.R  
ANINH  
AN-DIG  
  
AOL  
AOR  
ATSB  
  
AUDIO L&F  
  
BCK  
BRAKE  
BURSTER  
BUTDT-ER  
B-CHAR  
B-OUT  
CARDIR  
CARERR  
CARRE  
CARMVO  
  
CARMV1  
CARREF  
  
CCD  
CCD VID  
CD MODE  
  
CDMODE  
CDVID  
CDVID MO  
CEFM  
  
CGC-VER  
  
CHAR-BL  
CLAB  
CLAMP  
CLBD  
CLIP MODE  
CLP  
CKL  
CLOCK  
CLOSE  
CL-CID  
COM  
COM1  
  
COM2  
  
CVBS DOC  
COMP-BL  
CRI  
CSYNC 1  
CSYNC1  
CSYNC.1  
CVBS  
CVBS 0  
CVBS OUT  
CVBS-OUT  
CVBS-RFM  
CV-DOC



# ABBREVIATION

Signal	Abbreviation	Signal	Abbreviation
SB	Available in standby position	CD-TBM	Composite video time base measured
ACK	Acknowledge	C.V.-TBM	
ACKN		C.S.	Composite sync
AKN		D1	Diode 1 connection
ADC	Analogue to Digital Convertor	D2	Diode 2 connection
AGC(K)	Automatic gain control (k-factor)	D3	Diode 3 connection
AGND	Ground for the analogue circuit	D4	Diode 4 connection
AGNDB		DAAB	Data from A-chip to B-chip
ANGD		DABD	Data from B-chip to DAC-IC
ALE	Address Latch Enable	DAC	Digital to analogue convertor
AMPL.L	Amplifier for the left channel	DATA	Shift register data
AMPL.R	Amplifier for the right channel	DATA EN	Data enable
ANINH	Analogue output inhibited	DATA IN	Data input
AN-DIG	Control signal to switch between analogue digital audio	DATA OUT	Data output
AOL	Analogue output left channel	DEEM	De-emphasis
AOR	Analogue output left channel	DEMPN	
ATSB	Attenuation of the digital audio-signal in the B-chip controlled by the muP	DET	Detector of the low frequency sum signal
AUDIO L&R	Audio signal left channel and right channel for the TV-set	DGND	Ground for the digital circuit
BCK	Bit clock signal for the DAC	DIFF	Tray stop/ tilt enable
BRAKE	Brakepulse for the turntable-motor	DIGA L	Digital audio signal left channel
BURSTER	Burst error signal	DIGAL	
BUTDT-ER		DIGA R	Digital audio signal right channel
B-CHAR	Blue information from character generator	DIGAR	
B-OUT	Blue information output	DIR SEL	Selection of the rotation of the turntable-motor
CARDIR	Direction control for the optical pick-up unit	DO	Drop-out signal
CARERR	Control signal for the optical pick-up unit	D.O.	
CARRE		DOBM	Digital output signal from B-chip to output plug
CARMVO	Control signal pulse detector 0 (optical pick-up unit movement/direction)	DOUT1	Digital output 1
CARMV1	Control signal pulse detector 1 (optical pick-up unit movement/direction)	DOUT2	Digital output 2
CARREF	Start-up position indication of the optical pick-up unit	DREFL	Disc reflection (from tilt detector)
CCD	Charge couple device	DSC-M	Error generator IC (motor control)
CCD VID	Video charge coupled device	E1	Diode voltage of D1
CD MODE	Control switch audio/video 0=audio 0=video	E2	Diode voltage of D2
CDMODE		E3	Diode voltage of D3
CDVID	Compact disc video mode	E4	Diode voltage of D4
CDVID MO		EA	Enable
CEFM	Clock signal for eight to fourteen modulation	EFAB	Error flag from A-chip to B-chip
CGC-VER	Frame sync signal from synchronization generator	EFM	Disc signal CD audio/CD video (eight to fourteen modulation)
CHAR-BL	Character blanking	EN	Port enable system signal
CLAB	Clock signal from A-chip to B-chip	ENRE	Not connected
CLAMP	Clamp signal for loading mechanism	F76	Oscillator frequency 7.5 MHz
CLBD	Clock-signal from B-chip to DAC-IC	FB	Feed back
CLIP MODE	CDV-signal mode	FE	Focus error signal
CLP		FIL	Filament
CKL	Clock-signal	FIL 1	Filament conn. 1
CLOCK		FIL 1	
CLOSE	Close signal (tray mode)	FIL 2	Filament conn. 2
CL-CID	Clipped video for manchester decoding	FLEN	Frequency lock enable
COM	Communication line	FLOCKN	Frequency lock signal for external switch
COM1	Communication line 1 servo muP-user muP (DATA)	FOC	Focus actuator
COM2	Communication line 2 servo nuP-user muP (CLOCK)	FOC NORM	Focus normalizing signal/system
CVBS DOC	Colour video blanking drop-out corrected	FOC PULSE	Focus Actuator move pulse
COMP-BL		FOCPLS	Focus actuator move pulse
CRI	Counter reset inhibited signal (A-chip)	FOC RDY	Focus system is ready (focus has been found)
CSYNC 1	Composite synchronization	FOCRDY	
CSYNC1		FOC SERV	Focus servo loop indication
CSYNC.1		FOC SRV	
CVBS	Colour video blanking synchronization	FOCSRV	
CVBS 0		FOC SPD	Focus actuator speed indication
CVBS OUT		FOCSPD	
CVBS-OUT		FOC STA	Focus start-up pulse
CVBS-RFMO	CVBS radio frequency modulator	FOCSTA	
CV-DOC	Composite video drop-out corrected	FOC+	Focus actuator + connection
		FOC-	Focus actuator - connection
		G	Guard
		GM	Motor ground
		GND	Ground
		G-CHAR	Green information from character generator



Signal	Abbreviation
G-OUT	Green information output
HALL1	Hall-element A connection 1
HALL2	Hall-element A connection 2
HALL3	Hall-element B connection 3
HALL4	Hall-element B connection 4
HALL5	Hall-element C connection 5
HALL6	Hall-element C connection 6
HALL+	+ connection for Hall-elements
HALL-	- connection for Hall-elements
HF	high frequency signal
RF	
HFATBC	High frequency signal time base corrected
HFATBC	
HF-ATBC	
HF AV	High frequency signal audio+video
HFAV	
HF-AV	
HFD	High frequency detector signal
HFI	High frequency signal input (Decoder/A-chip)
HF(ANT-IN)	High frequency signal antenna (loop-through signal)
HF (TV OUT)	High frequency signal TV output (loop-through signal)
HF-OUT	High frequency audio
HLD	Hold signal (MFE duty cycle control)
HMANCH	Line pulse for decoding the manchester
H-MANCH	code
HPL	Headphone left channel
HP-L	
HPR	Headphone right channel
HP-R	
HSYNC	Horizontal synchronization signal
H/2	Half line frequency
I MOTOR	Motor current (turntable motor)
J MOTOR	
I2CI	Inter IC-signal
INTVID	Internal generated video graphics
INT.VID	
IREF	Reference current
LASGND	Laserdiode ground connection
LASMON	Laser monitor diode signal
LASOUT	Laser monitor output signal
LED-S	LED supply
LEV DET	Detector of the HF level signal
LF	Low frequency sum signal
LF SUM	
LFSUM	
LFD	Low frequency signal for decoding part (116% level)
LIM	Limiter circuit
LOFIC	Low pass filter IC
LPF	Low pass filter
LSB	Least significant bit
L+R	Left and right channel output signal
MC ES	
MCES	Motor control signal from A-chip to servo control
MC IN	Motor control signal output (for audio system synchronisation)
MCIN	
MCO	Motor control output (used for sync. generation wire in video II panel)
MFE	Frequency error signal for motor control
MOT	Motor
MPE	Phase error for motor control
MPLL1	Frequency lock indication signal for motor control
MR	Master reset
MTF	Modular transfer function
MUSB	Mute signal analogue audio
MUT A	
MUTA	
MUTE-A	

Signal	Abbreviation
MUTA/ ANDIG	Mute signal analogue audio (switch Analogue/Digital audio)
MUTE-AND	
MUTA/ANDIG	
MUTEL	Mute of the left audio channel
MUTE-L	
MUTL	
MUTER	Mute of the right audio channel
MUTE-R	
MUTr	
OOF	Out of focus
OPEN	Tray open signal
OB/TC	Offset binary/two's complement
OP4	Optical pick-up unit
OUT EN	Output enable signal
PD/OC	Phase detector output current
PHASEA	Coil A of turntable motor
PHASE B	Coil B of turntable motor
PHASEB	
PHASE C	Coil C of turntable motor
PHASEC	
PLNTSC	Selection port Pall/NTSC
PLOCK	Phase lock indicator output for servo processor
POTR	Potentiometer right channel
POT-R	
POTL	Potentiometer left channel
POT-L	
QCL	Clock signal of Q channel (subcode signal)
QDA	Data of Q channel (subcode signal)
QRA	Request/acknowledge of Q-data (A-chip-μP)
RAD	Radial actuator
RAD LAG	Radial lag control
RADLAG	
RAD PLS	Control signal to move the radial actuator (high speed)
RADPLS	Control signal to move the radial actuator (slow speed)
RAD SPD	Control signal to move the radial actuator (slow speed)
RADSPD	Control signal to move the radial actuator (medium speed)
RAD SP1	Control signal to move the radial actuator (medium speed)
RADSP1	Signal to control the direction of the movement of the radial actuator
RADDIR	Integrator control (on/off) RAD OUTPUT STAGE
RADINT	
RAD SRV	Control mode switch (X-detection control /RE-control or DAC-control)
RADSERV	
RADSRV	
RADXON	Control mode switch (X-detection control/RE-control)
RAD+	Radial actuator + connection
RAD-	Radial actuator - connection
RAMP	Timing signal
RAMP-EN	Start of timing signal (enable)
RE	Radial error signal
RE-DIG	Digitalized radial error signal
REDIG	
RE IN	Input of the radial error signal
RE IN	
REIN	
RE OUT	Output of the radial error signal
RE1	Part 1 of the radial error signal
RE2	Part 2 of the radial error signal
REDET	Detector of the radial error signal
REF	Reference signal
REFH	Line frequency reference
REMAC	Remote acknowledge
REMIN	Remote control input
RESET	Reset pulse
RGB	Red-green blue information
R-CHAR	Red information from character generator
R-OUT	Red information output
S	Substrate
SI	Radial reference line control signal 1



Signal	Abbreviation
S2	Radial reference line control signal 2
SCAB	Subcode clock-signal from A-chip to B-chip
SCHE	Signal derived from the difference signal coming from the X-detector
SCK	Serial clock-input
SDAB	Subcode data from A-chip to B-chip
SHIFT CLK	Clock pulse for shift register
SHIFTCLK	
SM+	Spindle motor + connection (turntable motor)
SM-	Spindle motor - connection (turntable motor)
SSM	Start/stop signal for turntable motor
STANBY P	Control of the standby LED in the power control circuit
STROBE	Parallel load signal
SWITCH-S	Switch sense line
TANG-ER	Tangential error signal
TBC-ON	Time base control on
TDETD	Difference signal coming from the X-detector
TILT D	
TILTD	
TDETS	Sum signal coming from the tilt-detector
TILT S	
TILTS	
TLEDON	Tilt LED on/off control
TILTLED	LED for tiltcontrol
TLTLED	
TILT+	Tilt control signal (clockwise rotation of the tiltframe)
TILT-	Tilt control signal (counter-clockwise rotation of the tiltframe)

Signal	Abbreviation
TL	Track loss signal
TLT MOTOR	Tray/tilt motor
TLI	Time error control signal
TM+	Tray/tilt motor + connection
TM-	Tray/tilt motor - connection
VBC-DOC	Video blanking synchronisation drop-out corrected
V MDT	Motor voltage
V MOT	
VMOT	
VCO FRE	Voltage controlled oscillator frequency
VH	Hall-element voltage
VHALL	
VID AMP	Video amplifier
VMANCH	Frame pulse to decode the manchester code
V-MANCH	
VOLL	Volume control for the left channel
VOL-L	
VOL-R	Volume control for the right channel
VREF	Reference voltage
VSYNC	Vertical synchronisation
WS	Word select signal
WSAB	Word select signal from A-chip to B-chip
WSBD	Word select signal from B-chip to DAC-IC
X DETS	Sum signal coming from the X-detector
XDETS	
XDET D	Difference signal coming from the X-detector
XDETO	
XDETD	
XCLED	LED for X-direction control
X-LED	
X-DET	Detector of the X-direction movement
XSYS	System clock frequency coming from the X-tal